

In this project, we position Objects with Intent as a new paradigm for designing smart networked products that exhibit 'intent' both in terms of objects displaying intentional behaviour and in their ability to influence people and situations. A workshop was held to better understand the systemic and ethical implications of this approach by investigating the role of 'intentful' objects in the everyday practise of 'coming home'.

EXPERIMENTAL TOOL

Adopting an intentional stance is a useful strategy to understand how people perceive and interact with smart networked products. With an intentional stance, the behaviour of products and systems is understood and predicted by beliefs and intentions rather than predicting behaviour based on natural laws or mechanistic deductions. Within this line of reasoning, Objects with Intent is a useful paradigm to design products that can sense and reason, demonstrate proactive behaviour, and share knowledge with other things in a network.

Objects with Intent is primarily concerned with designing intuitive collaborations between humans and objects by foregrounding the object's embodiment as the nexus of interaction. Embodiment indicates the bodily aspects of our being-in-the-world among people and things, and appeals to the sensibility and intuitiveness in the interaction with the world around us. Furthermore, through their embodiment and materiality, things are

expressive and are woven into the social fabric of everyday life. Adopting an embodied, intentional stance towards smart and networked products opens up new endeavours for behaviour change. Behaviour-changing technology (also called Persuasive Technology) is a much-explored research field that generally places technology at the centre of the behaviour change. Only recently has this field adopted other approaches to behaviour change, allowing them to become a more integral part of people's daily activities instead of (web-based) support tools that exist alongside these activities. Thinking about the intentionality of objects might integrate these tools in daily activities even more.

»Low-fi prototyping in preparation for the workshop allowed for fast interaction set-ups between people and things in scenarios.«

Lisa Kooijman

In this workshop, we explored the multiplicity of experiences and meanings that surround the everyday practise of 'coming home'. In scenarios and enactments, participants focussed on the role that people and objects play when coming home and how intentful objects might change people's experiences and behaviours.

WHAT HAPPENED?

THE MOOD-CHANGING KITCHEN

In this scenario, participants explored how objects in the kitchen (a stove, utensils, plates) could influence the mood that a person is in while cooking, with the intent to create a pleasant atmosphere after coming home from work. For instance, the kitchen would know the mood of the person by the way they would place (or throw away) their keys. The kitchen would then suggest a recipe that responds to the mood of the person by considering the actions that are required to prepare it.

»With roleplaying, the intent of objects could be spontaneously explored. We focussed on how the expressed intent of objects blended naturally in the everyday practise of coming home.«

Wouter Eggink

THE HOUSE AS A SERVANT

This scenario explored the situation of a person coming home to collect their sporting gear and to quickly eat something before soccer practice. The house acts as a servant

that checks and opens the drawers to help them grab their sporting gear. While eating, the house suggests that it is time to leave by changing the ambient lights and music, which become more persuasive to get them to soccer practice on time.

»Breathing life into a product or environment by giving it a personality and acting it out makes for a quick but powerful way of understanding the nuances of good smart product interaction.«

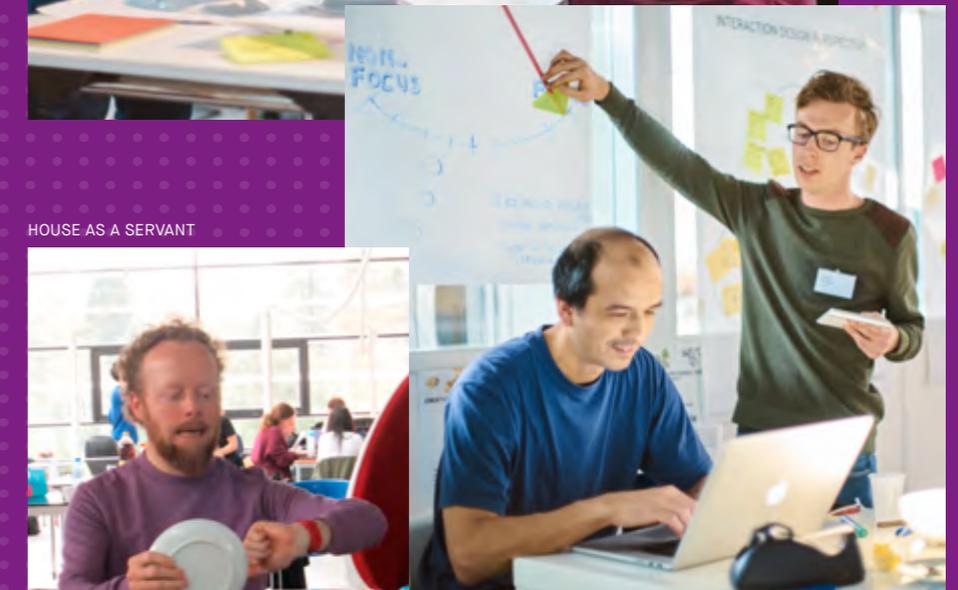
Pieter Diepenmaat

LAMPS THAT CARE

This scenario focussed on coming home at the end of the day to your partner who is working from home. The group explored how lamps could support the level of concentration of the person working from home as well as helping them make the transition from work-time to family-time. Upon the person's arrival, these lamps would change the light from a cool to warm colour, inviting the partner to stop working and pay attention to the other person.



MOOD-CHANGING KITCHEN



HOUSE AS A SERVANT

LAMPS THAT CARE

WHAT DID WE LEARN?

New design approaches are emerging as IoT technologies are maturing. Objects with intent may well be part of the emerging field of human-environment interaction as these objects will be increasingly be part of product ecologies and networks of products that involve multiple users. After enacting with Objects with Intent, we identified three themes related to their social embedding, interactivity, and interactive form.

POWER PLAY

We have learned how objects could influence the everyday practise of coming home in different ways, raising questions about 'who' or 'what' can decide a course of action and how this can be done democratically. With the mood-changing kitchen, objects proactively influenced people's mind-sets or moods. The lamps showed how objects that merely responded to a person indirectly influenced their work by helping them reflect on their behaviour. In a more complex way, these lamps also mediated the social interaction between two people in which the lamps served as a catalyst.

GIVE AND TAKE

We also observed how annoying it is when objects make decisions on your behalf when you do not agree. Furthermore, we noticed how equally annoying it is when objects continuously ask you what to do. Social appropriateness and good timing are essential when it

comes to designing the behaviour of objects. The lamps, for example, could suggest certain things in a way that people could effortlessly ignore. The house-as-a-servant could eventually become pushy but only when it was time for the person to leave the house, while the mood-changing kitchen was more of a collaborator, helping to change people's moods through interactions with the objects in the kitchen.

LIVING THINGS

It is easy to anthropomorphise objects that display some kind of intelligence and intentionality. We learned how personality and character could help you understand what you could expect of these objects and might also help you to build a relationship with them, which requires trust and self-disclosure over time. We've witnessed that the emotions of these products could support behaviour change. For example, the kitchen might give you compliments or the lamp could be angry at you because you are working for too long.

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KEY INSIGHTS

Objects could influence the everyday practise of coming home in different ways, **helping people reflect on their behaviour** by simply reacting to their mood or by changing their mood.

Social appropriateness and suitable timing with regard to object-human interaction are essential when designing the behaviour of objects.

The personality and character of objects could **support behaviour change**, helping people understand what they could expect of them and **build relationships** with these objects through trust and self-disclosure over time.



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OBJECTS WITH INTENT

ENACTING THINGS THAT LIVE

