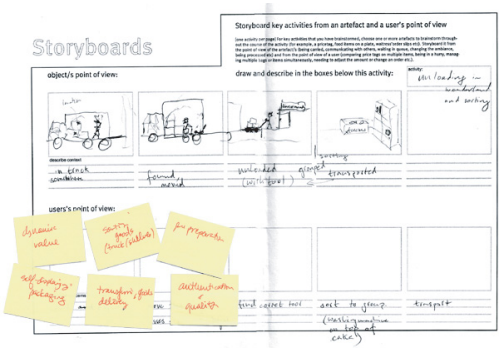
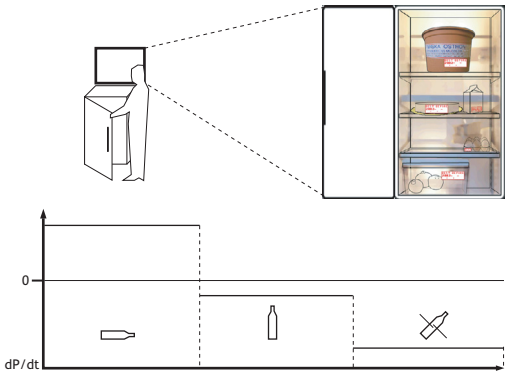
restaurant future scenarios of interaction with smart objects

Using design methods to support collaboration within a multi-disciplinary working group, we developed scenarios of 'smart' objects supporting dynamic workflows, information display, and new interactions in a restaurant setting. Three prototypes were implemented for innovative experiential demonstration of ad-hoc networking, distributed sensing, and collective intelligence among multiple objects embedded in scenarios of use.





restaurant scenario

Scenario methods were applied in the Smart-Its project to open a collaborative design space for diverse stakeholders and expertise, and to achieve a balanced approach to technical innovation and user experience. Scenarios supported application **ideation**, design and technical **guidelines**, and **communication** of concepts to the public. They were developed using design methods and materials such as personas, paper mock-ups, storyboards, video scenarios, and role-play.

From the scenario work, the Restaurant application explored interaction concepts with smart artifacts integrated in the workflows, dynamic activities, and user needs in a specific context of use.

interaction concepts

In Restaurant, three scenarios illustrated interaction concepts for smart, context-aware objects communicating through ad-hoc networks.

In the '**oyster auction**', sensor-enhanced packaging enables oysters to determine their level of freshness and communicate through a dynamic label. In the '**dynamic menu**' scenario, wine bottles monitor their history, negotiate a value amongst themselves, and display detailed information to consumers through dynamic interfaces. In '**ready to be served**', the natural actions of a chef gathering items together on a tray triggers an order to monitor and display to a waiter when its ready to be served.

experiential prototypes

Physical prototypes were developed combining sensor perception and network technology in relation to scenarios of use.

These were implemented in an interactive installation as mock food items containing Smart-Its devices - users manipulated the items to trigger video scenarios illustrating the restaurant context and technology concepts. In an evaluation workshop, this installation demonstrated computation as a property in the design of smart objects. For public exhibition, the installation involved visitors in a hands-on and experiential way in exploring scenarios of a possible of a technological future.

project team

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Smart-Its
www.play.tii.se/projects/smartits
www.smart-its.org

The Restaurant application has been developed within the Smart-Its project, which investigates computational devices for augmentation of everyday things. Smart-Its is funded by the European Union's Disappearing Computer Initiative and is a collaboration among Lancaster University, UK, ETH Zurich, the Interactive Institute, Sweden, the Viktoria Institute, Sweden, University of Karlsruhe, Germany, and VTT Electronics, Finland.

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