

Waterbot

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The Paper

“Waterbot: Exploring Feedback and Persuasive Techniques at the Sink”

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Content

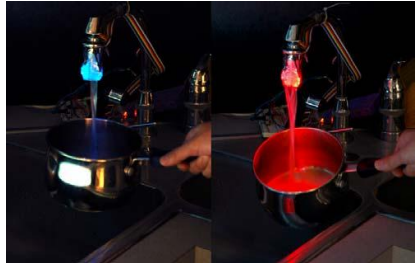
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Overview

- A system to inform and motivate behavior at the sink
- Persuasive techniques (instead of automatisisation)
- Four prototypes
 - HeatSink
 - SeeSink
 - CleanSink
 - WaterBot

HeatSink

Illuminates the water stream dependent on its temperature



SeeSink

- tasks detected with CCD camera
- automatic temperature and flow control
- illumination like HeatSink



CleanSink

For monitoring of hand-washing compliance.

- flashing after time
- RFID login
- connected with environment (lights, locks)



WaterBot

- tracks water usage
 - time
 - flow
- visual feedback
 - HeatSink
 - LED bars
- auditory messages



Motivation

- Test HCI in hostile environment
- Test persuasive techniques
- Test different feedback approaches

Insights

- HCI can work in environmentally challenging places.
- Automation can be replaced by persuasive techniques.
- Some feedback approaches are better recieved than others.

Methodology

- Seven design principles identified
 - Value-Added Design
 - Automation
 - Just-in-Time Prompts
 - Positive Reinforcement
 - Negative Reinforcement
 - Adaptative Interfaces
 - Social Validation

Methodology

- Pilot study:
 - 10 users
 - several uses
 - reactions registered by observer

Methodology

- User study:
 - 2 months
 - 15 users
 - community sink
 - surveys every 2 weeks

Impact


Practical applications:

- improve safety
- improve hygiene
- conserve water

Possible foundation for future studies.

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