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Mobile HCI: Project Presentation

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Story

- ▶ You are going home listening to music on your iPhone
- ▶ You aim at your home sound system and swipe your music in its direction
- ▶ The music resumes where you were and is now being played on the remote device

Story 2

- ▶ You are watching a movie with your friends
- ▶ You want to continue watching it at your place
- ▶ You "grab" it in your phone and push it back on your TV when you arrive

Goals

- ▶ Transfer content from device to device seamlessly
- ▶ Use a smartphone as an intermediary container
- ▶ Easily interact with new devices

Move the content

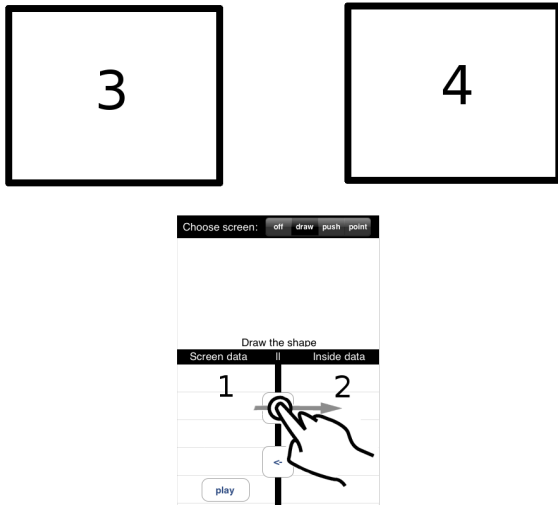


Figure: You move the content from the device to your phone

Our approach

Main interaction challenge: how to select a screen ?

- We wanted to avoid a close or physical interaction
- We focused on trying different remote interaction solutions

Focus on

- ▶ We have studied several recognition mode to recognize new devices:
 - ▶ Display a shape on each computer, draw it on the phone
 - ▶ Display a shape on each computer, push the corresponding button on the phone
 - ▶ Recognize with the phone's camera

Recognition process

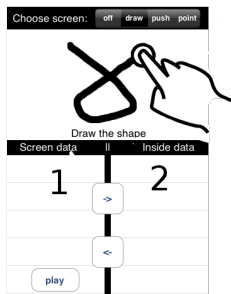
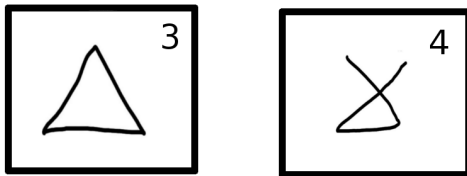


Figure: Start by recognizing the device (method 1: \$ gesture recognizer)

Show time!

<http://www.youtube.com/watch?v=iKWPwfsyXh4>

<http://www.youtube.com/watch?v=eRVgOVPhAPQ>

<http://www.youtube.com/watch?v=-WOfVtWGzzM>

User study: results

- ▶ The first method is quite natural and has been appreciated
- ▶ The second method (buttons) is less natural and you have to look at the buttons. This can be improved by displaying only the needed number of button
- ▶ The last solution is the easiest to use

Something we wanted to ask!

Under the hood

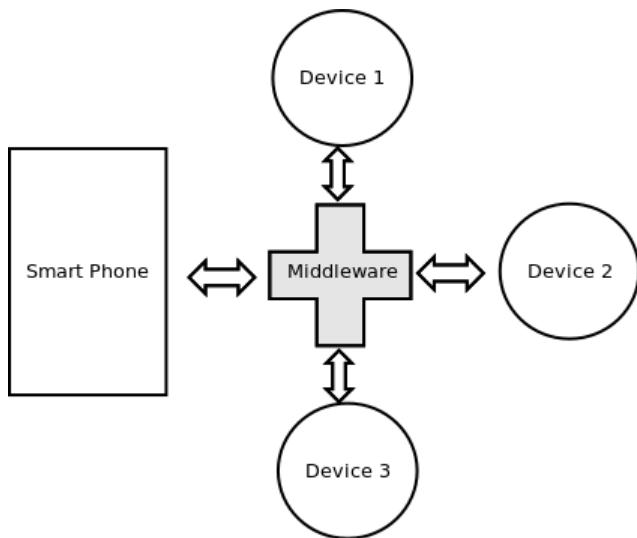


Figure: The whole system

Conclusion

- ▶ A brand new way to interact with all your connected devices
- ▶ An extensible solution that can lead to new projects involving scalability, usability and new recognition schemes

Thank you for your attention