Mobile Computing in the Retail Arena

User-Centered Design

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Designing for the User

- Mobile device in retail environment?

- Interactive relationship

- User-centered design

- Designing and evaluating for mobility

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Introducing the Context

- The grocery store

- The shopping experience

- Technology in the grocery store

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Inquiry Methods

- How do people shop?
  - Observations

- What do people want in a shopping aid?
  - Contextual interviews: 6 shoppers
  - Survey: 46 participants

Why We Buy
Paco Underhill

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User Profile

- Grocery lists
  - Physical list maker- 56%
  - Mental list maker- 44%
- Most frequent shopper
  - Once a week- 54%
  - More than once a week- 30%
- Frequent same store- 72%
- Participate as "Frequent Shopper"- 65%

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Prioritized Features

1. Create a grocery list
2. Arrange a grocery list
3. Product location by aisle
4. Itemized pricing
5. Specials and coupons
6. Electronic checkout
7. Price comparison
8. Store map
9. Download recipes
10. Nutrition and product information

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Design Challenges

- Out of the head, into the world

- Hands busy, eyes busy task

- Ambulatory users

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Technology Review

- Other research
  - Easi-Order
  - Shoppers Eye
- Handheld uses & limitations
  - Organizational
  - Display, resolution, and input
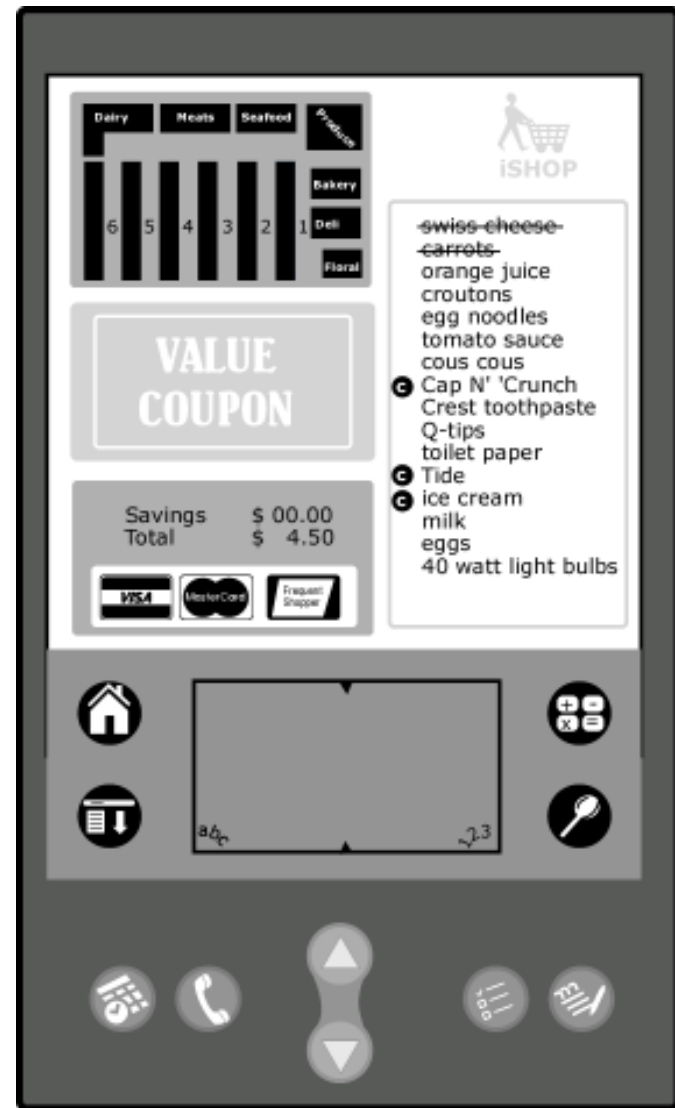
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Introducing the Concept

- Shopping shakedown
  - Analysis of the task
- How could people use a shopping aid?
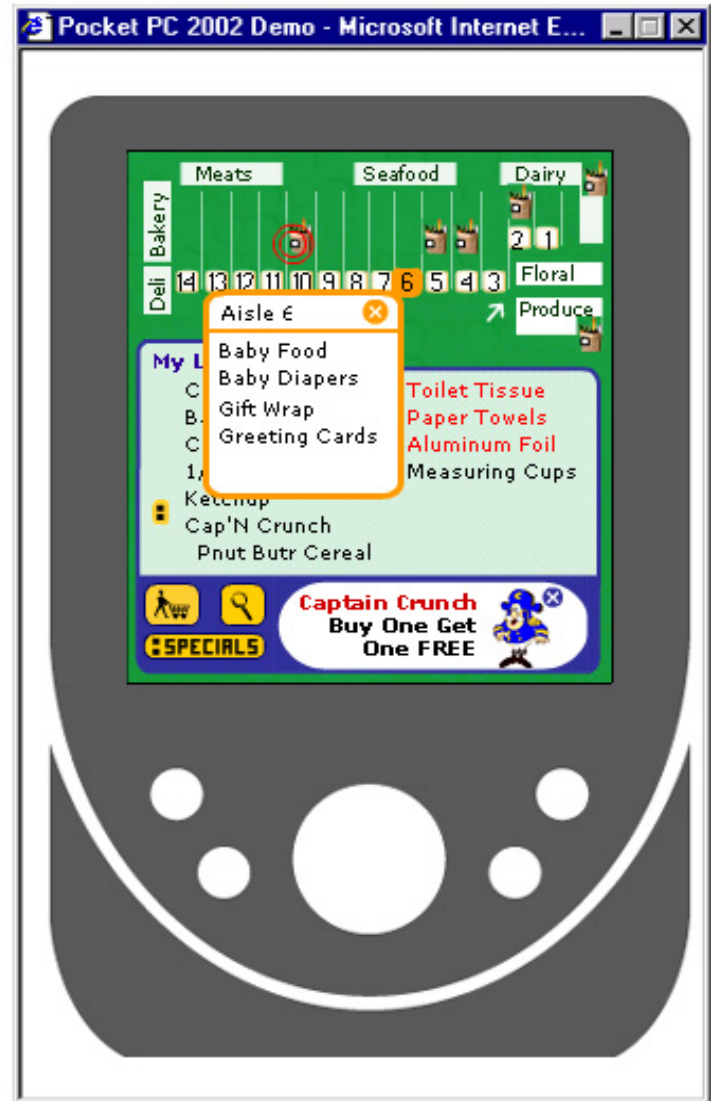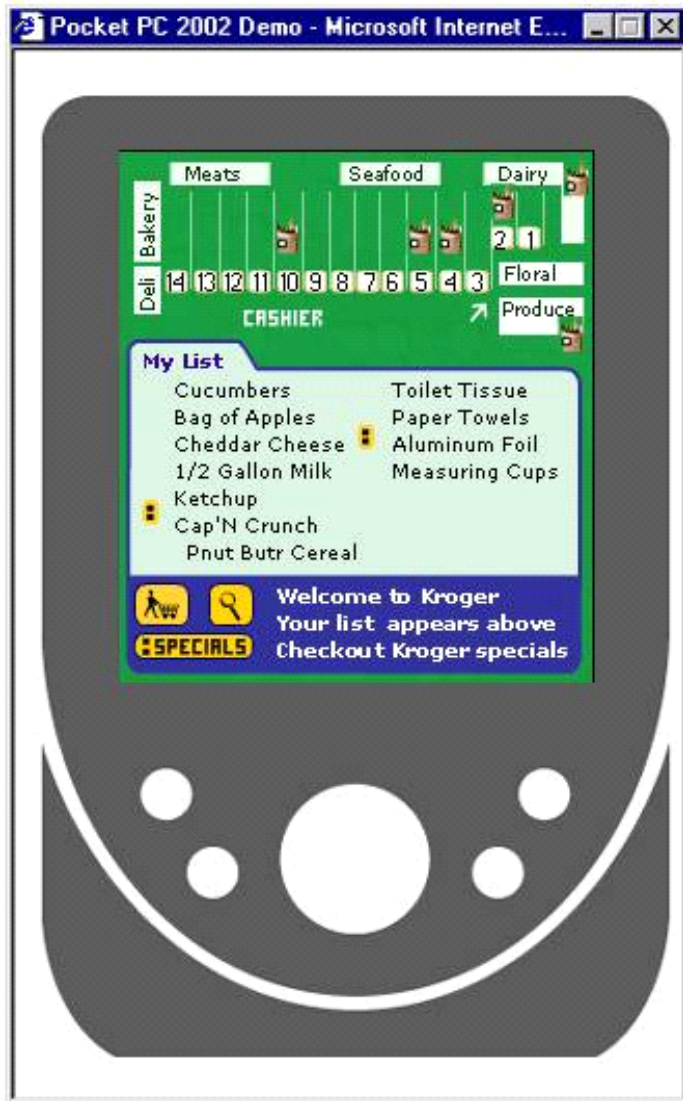 - Scenarios
    - "Blue-sky"
    - Reality

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Spatial

Contextual

Design Iteration

Final Design

Evaluation In-Context

- Usability test: 5 participants
- User feedback
- Device limitations

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What did we learn?

- Interface evaluations
  - Strength of the metaphor
  - Navigation as an aid
  - Situated reminders
- Interaction monitoring
- Remember the environment

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Conclusion

- Further exploration of interface design for mobile applications in highly contextual scenarios

- Other retail domains

- Other device solutions

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