

# User Interaction with Interactive Digital Television

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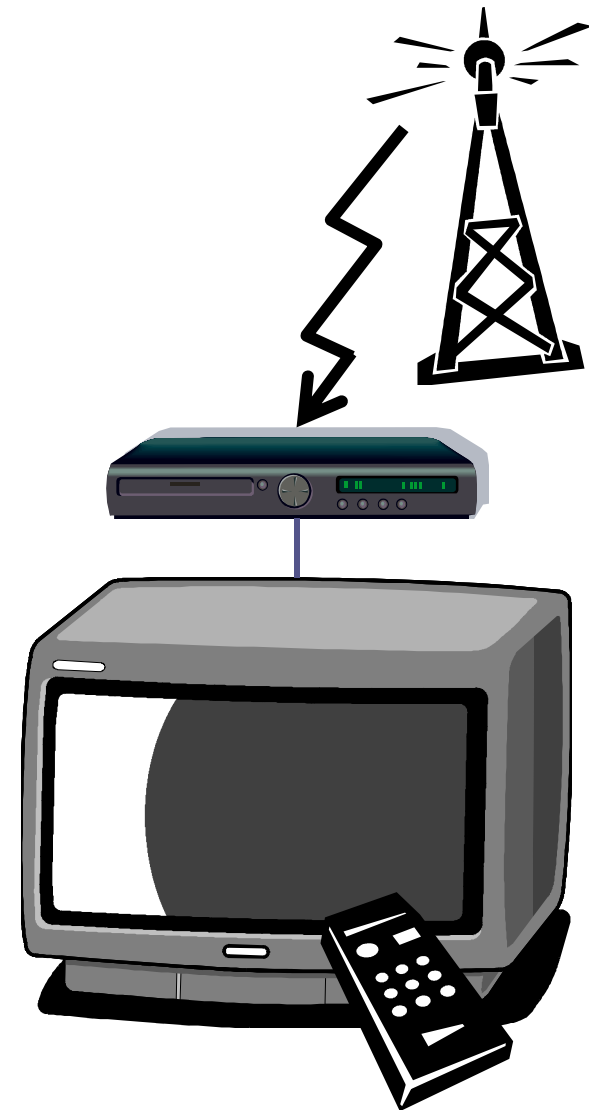
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# Motivation

- Elderly people are not typical target group
  - They are excluded from design process
  - They have specific abilities and constrains (e.g. sight or hearing impairment)
- Interfaces designed for elderly users can be easily operated by majority of other users

# Interactive Digital TV

- Benefits of iDTV
  - 99% of households have TV
  - TV is familiar device
- Limitations of iDTV
  - Small resolution of TV
  - Lean-back user interaction
  - Remote control
  - Poor performance of set-top boxes
  - Limited memory and storage



# Our Research

- Primary focus on user interaction with iDTV for elderly people
  - User-centered design
  - Guidelines, mockups, demos
  - New interaction modalities
    - Gestures, Voice, Pointing
  - Usability testing
- Secondary focus on content creation process
  - Transport stream generator
  - Prototyping tool for t-learning courses
- Participation in projects of EC
  - ELU (Enhanced Learning Unlimited): T-learning
  - VM (Vital Mind): Using iDTV for cognitive training

# Example 1: ELU

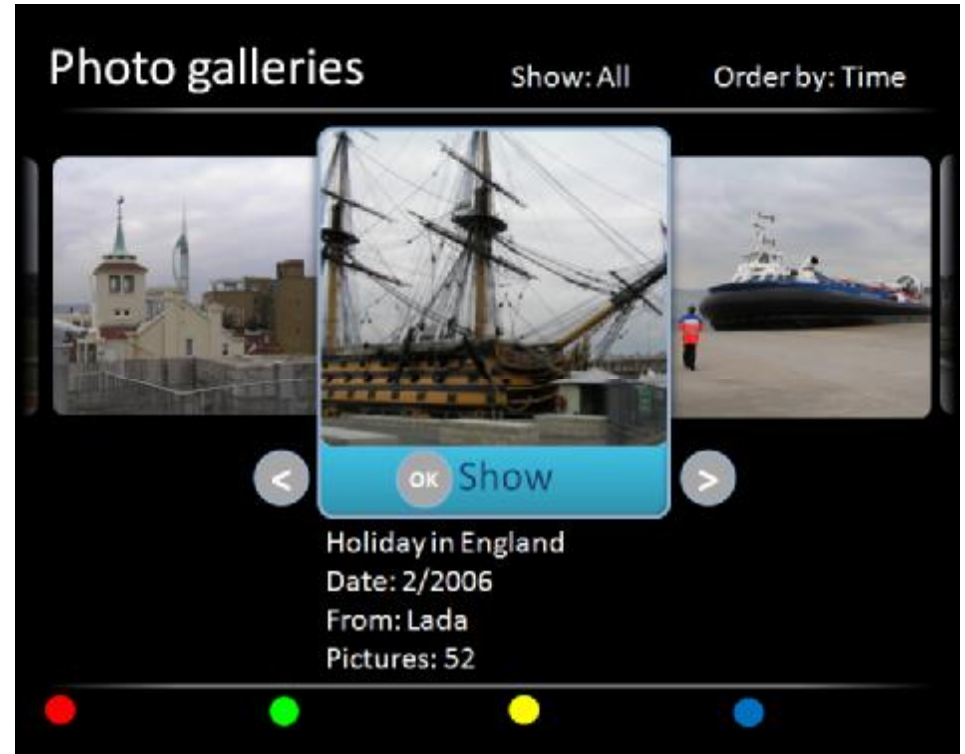
Audio-visual content

Interactive content

Does exist cubism in interior design?

TV program

# Example 2: Vital Mind



# Conclusion

- Creation of effective user interfaces for iDTV is very difficult
  - There are no general guidelines established
  - iDTV user interfaces are not uniform
    - Visual style is adapted to visual style of TV program
  - There are no affordable tools
- Java (MHP) is competing with DHTML and Flash
- There is big potential for Java (and JavaFX)
  - If there will be affordable tools (e.g. Netbeans module)

Thank you for your attention.

Questions?



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