



Final Presentation Project Thesis

# Exploring Limitations of Mobile Platforms

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# Procedure

1. Motivation
2. Approach
3. Experimental Study
4. Conclusion

# Motivation

- Mobility getting more important
  - Current development on mobile device market
    - Mobile devices with advanced hardware capabilities
- > Feature-rich applications for mobile usage



# Motivation

- Focus on limitation of

- Display size:

- 240 x 320 pixel or less

- Input techniques :

- stylus
- touch and gestures
- Keypad
- QWERTY keyboard



# Approach

- Android Framework (Release 1.1)
- Comparison of Mobile Platforms
  - Java ME
  - Android
- Implementation of Application for Social Networking

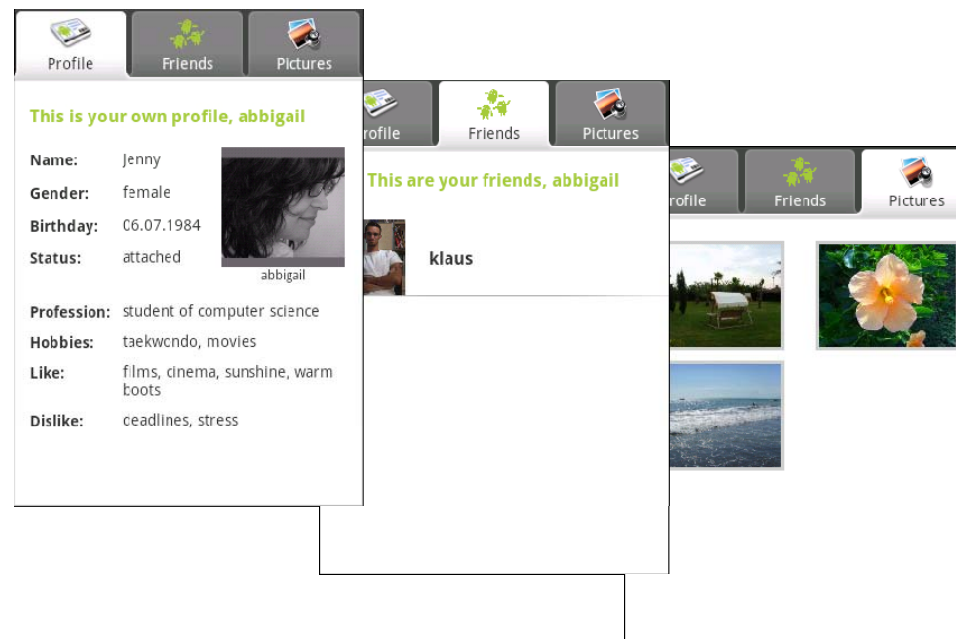
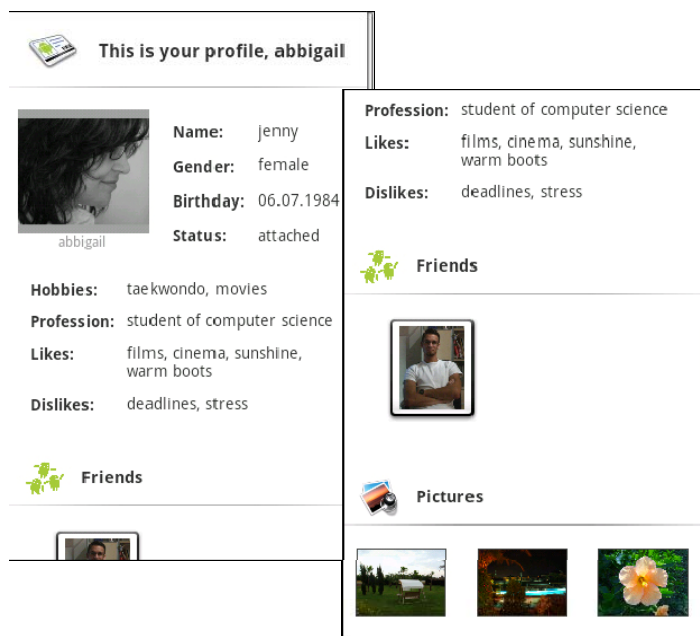


# Approach

- Development of two prototypes dealing with:
  - Screen components
    - Arrangement
    - Interaction via menu
  - Different input techniques
    - Hardware dependency

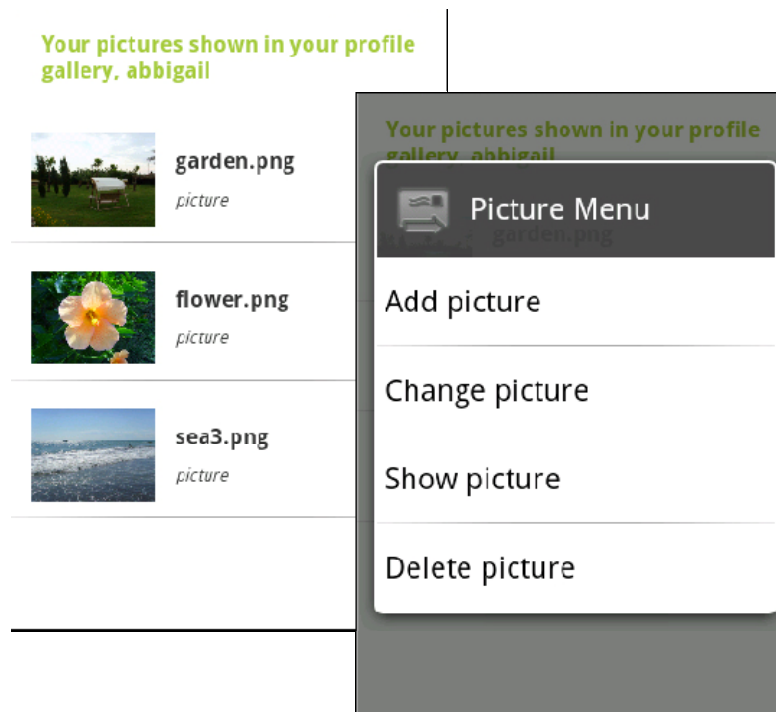
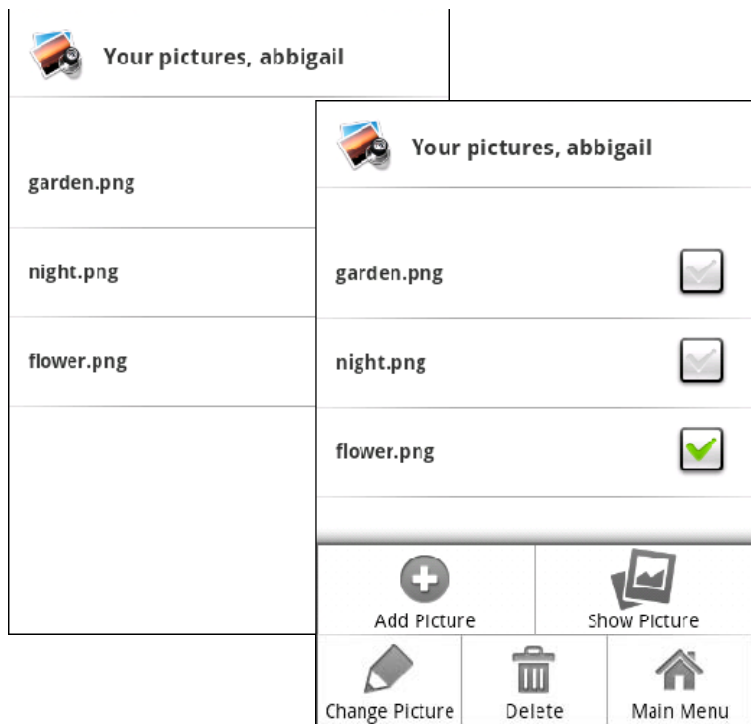
# Approach

- Scrollable View vs. Tabbed View



# Approach

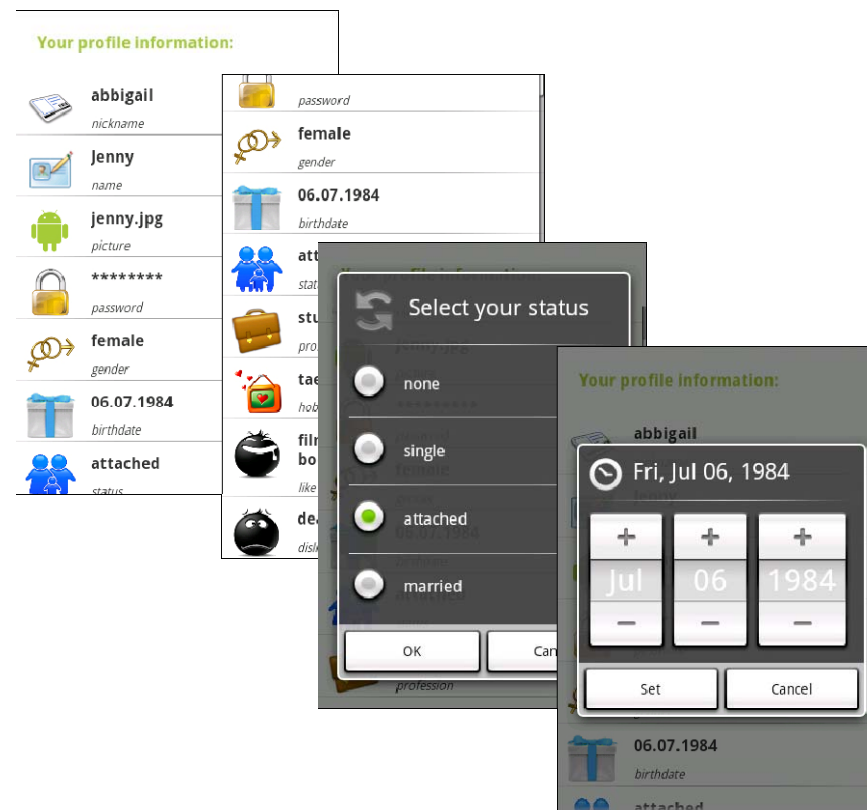
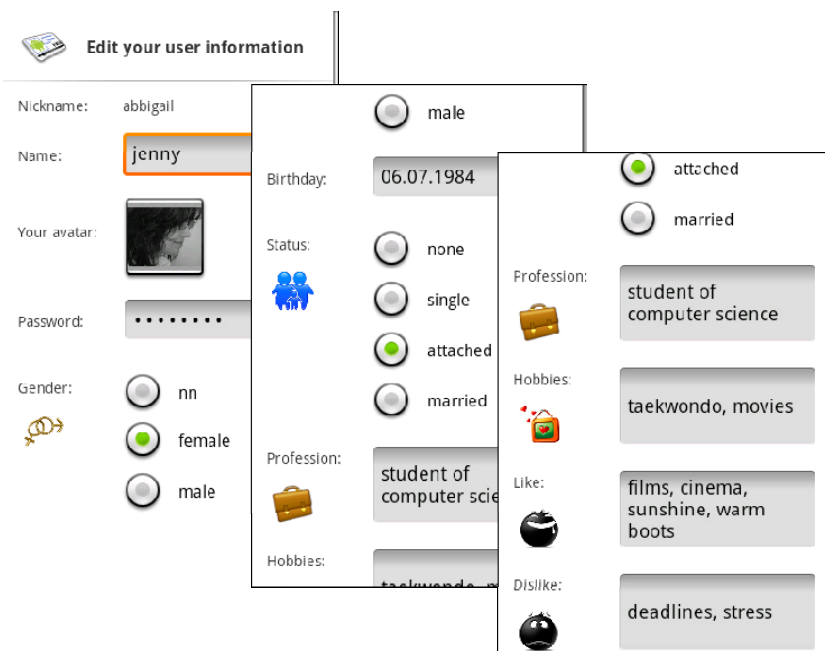
- Device Menu vs. Context Menu





# Approach

- Direct Textinput vs. Modal Pop-up Windows



# Experimental Study

- Participants chose Tabbed View over Scroll View

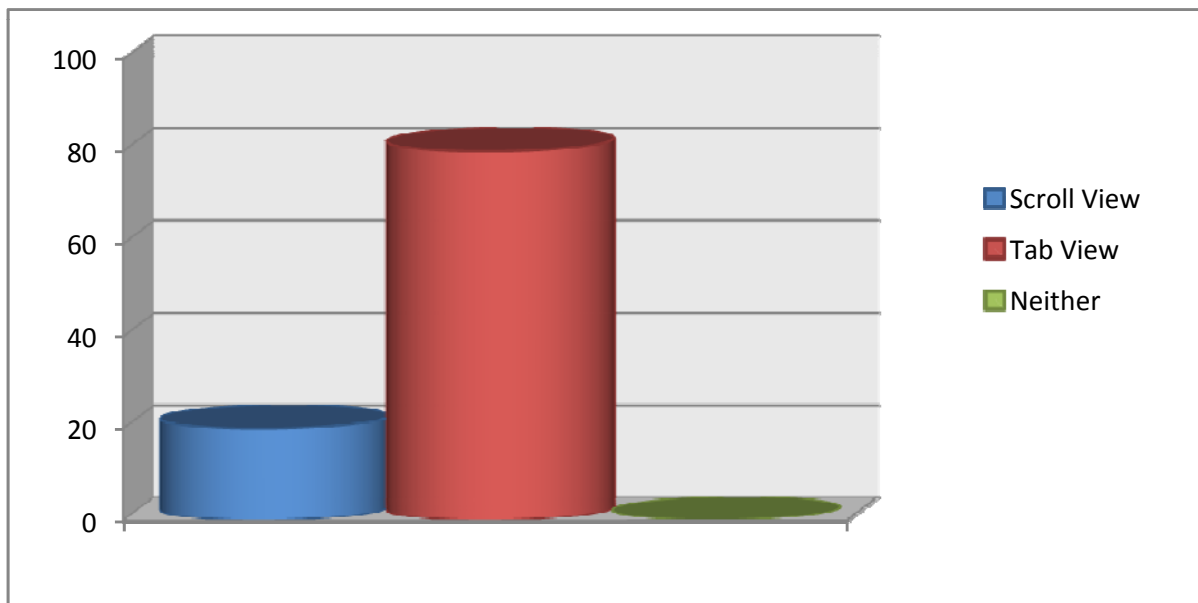
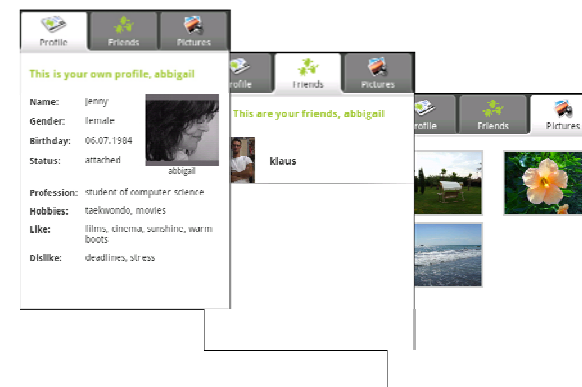


Figure : Rankings of the preferred Arrangement of the Profile



# Experimental Study

- Problems with Modal Windows for Input

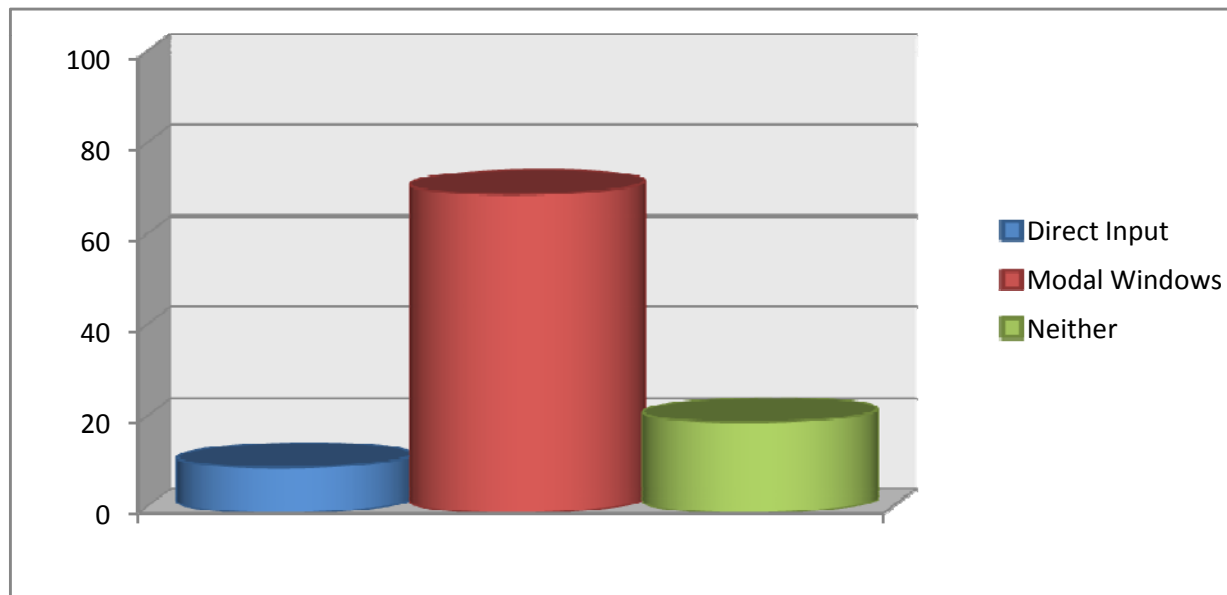
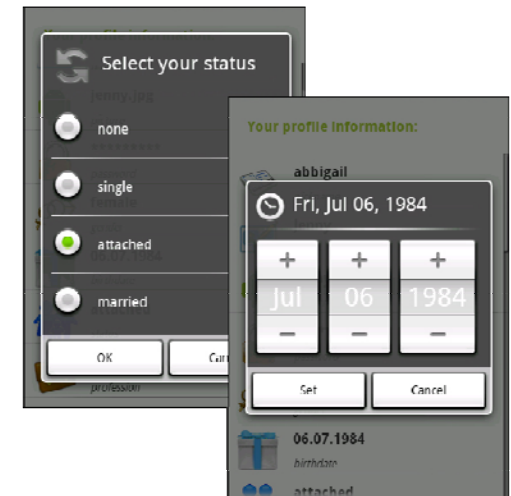


Figure: Rankings to the most difficult input techniques



# Experimental Study

- Problems with date entry via 'DatePicker'

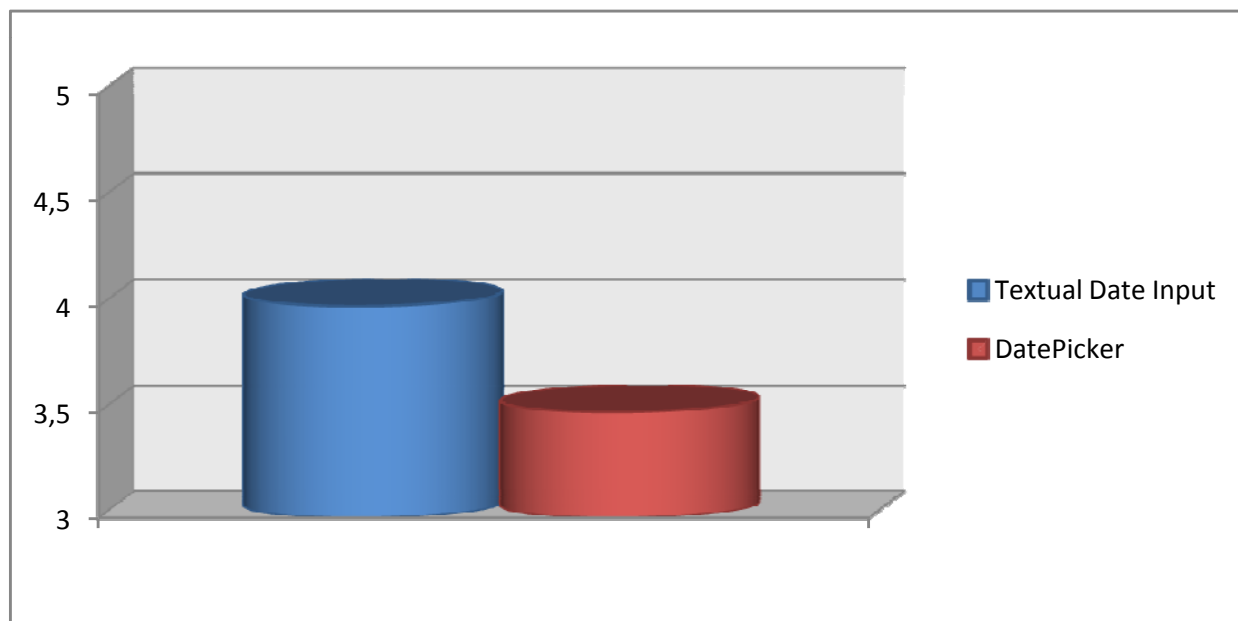
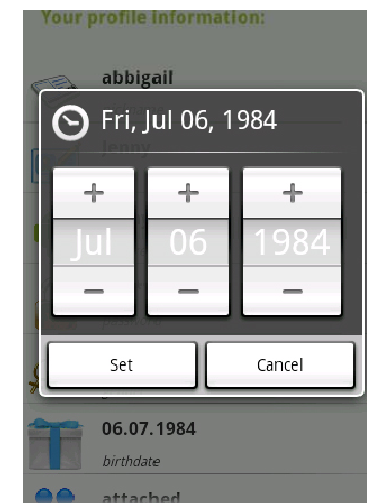
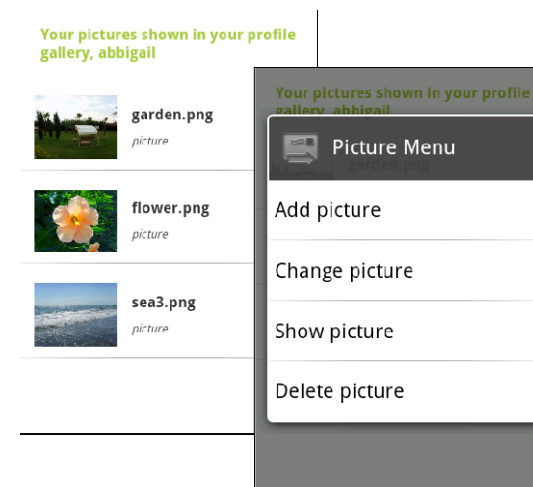


Figure: Ratings of the statement "it was easy to input a date"



# Experimental Study

- Controversial opinions about Context Menu
  - Significantly bad ranking for Accessibility
  - Equal ranking for Preference





# Conclusion

- Framework provides:
  - Wide range of screen components resolving limitations
  - Gives developer great power over layout



# Conclusion

- Remaining issues
  - Appearance of some widgets
  - Difficult Access of Context Menu
  - Hardware Dependency (Framework Release 1.1)
  - Low Amount of devices running Android



**ANY QUESTIONS?**