



Politehnica
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Automatic
Control and
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Faculty



Computer
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Department

Ambient Intelligence for Task Integration on Android

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- What is AmlciTy?
 - AmlciTy is a task organizer Android application.

- What does it achieve?
 - High level of integration with Android features.
 - Easy sharing
 - Tasks are easy to complete.

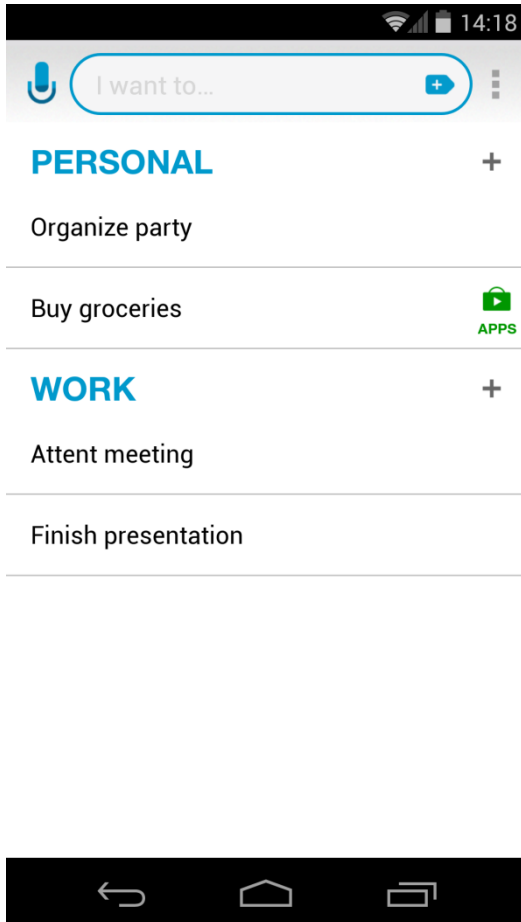
Analysis of existing solutions

CONTEXT

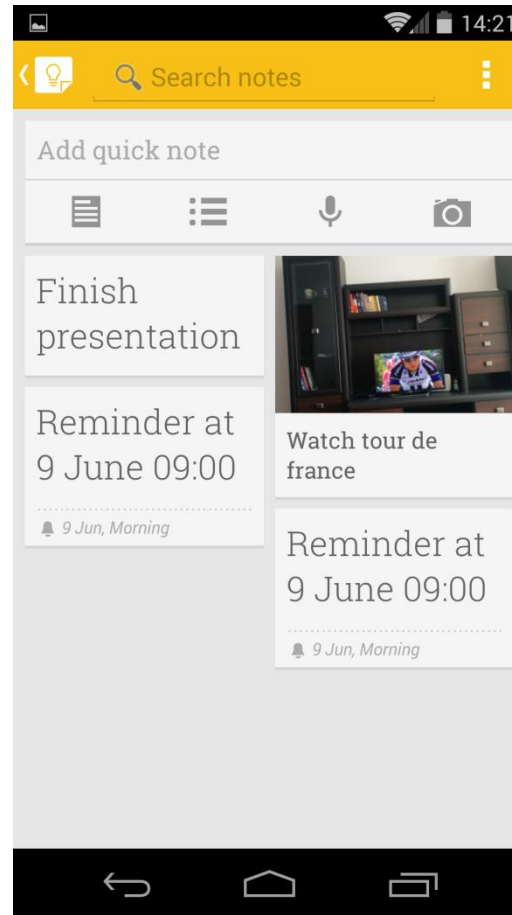


Context – Top Applications

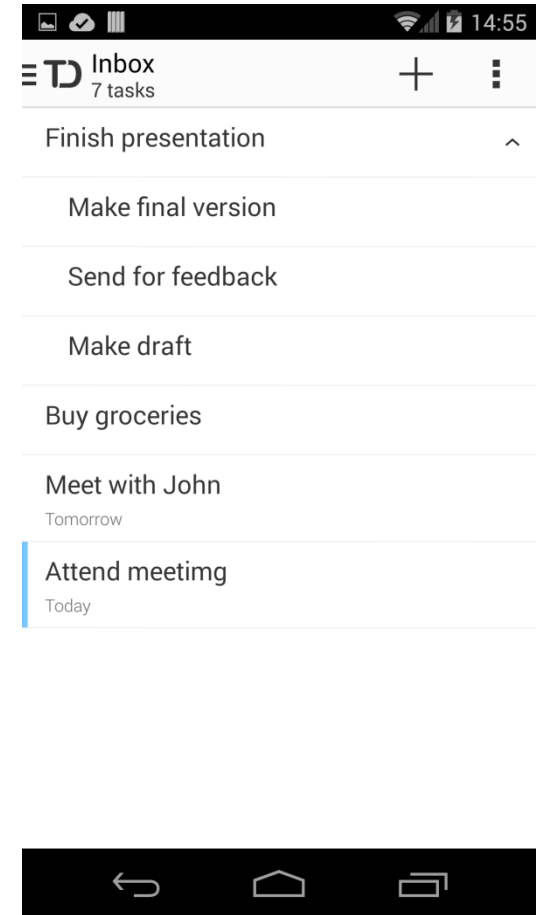
Any.DO



Google Keep



Todoist





Context – What can we learn?

- Strengths
 - Easy to use
 - Simple interface
 - Notifications
- What can we improve?
 - Link files, photos and contacts with a task.
 - More sharing options

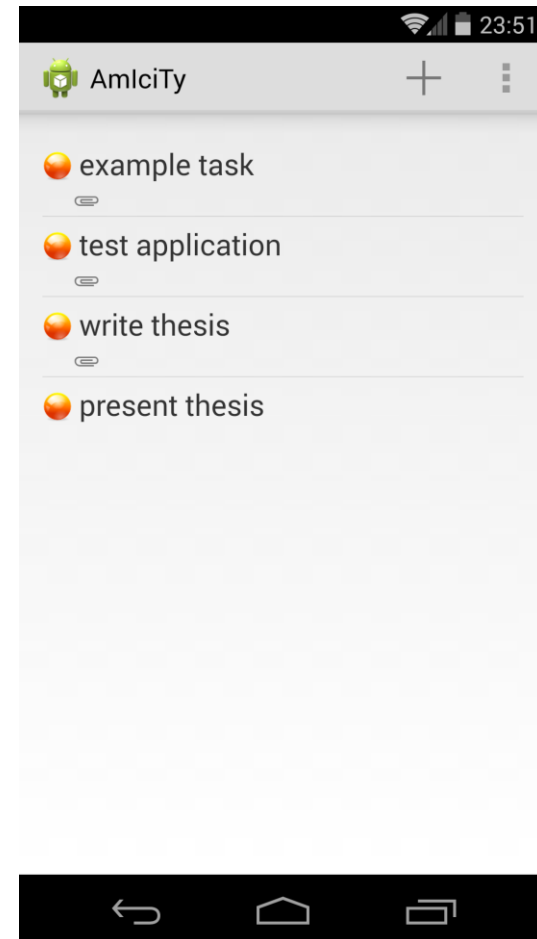
What is does and how it does it.

APPLICATION DESCRIPTION



Home Screen

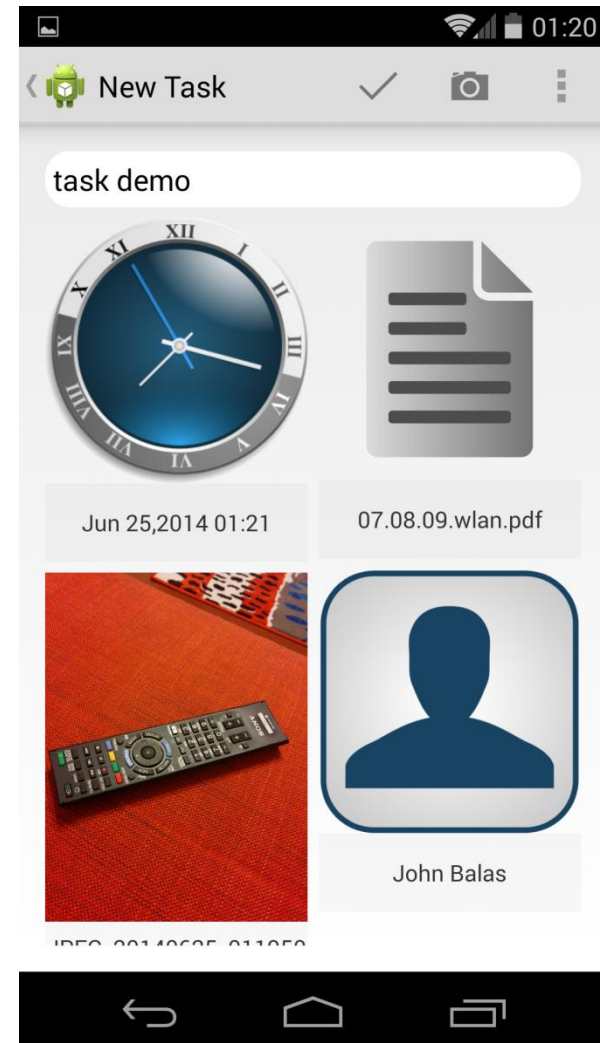
- Task List
 - Displays tasks
 - Swipe to dismiss
- Task item
 - Descriptive icons
 - Tap to edit
- New task





Task Screen

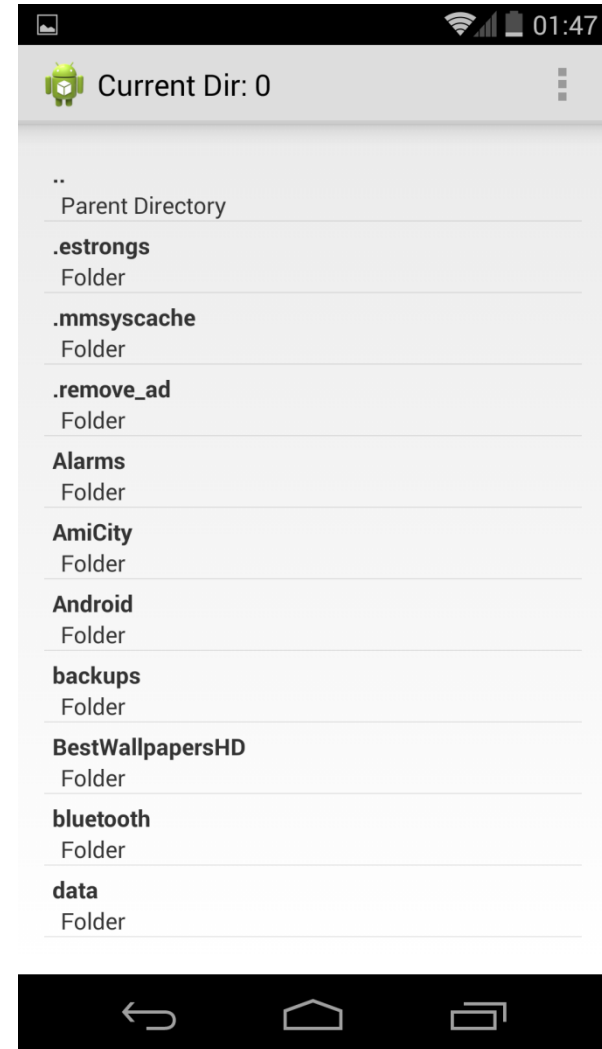
- Displays task assets
 - Tile layout
 - Asset → Image + Label
 - Task description
- Add new assets
 - Use action bar buttons





Add file to task

- Custom file picker
 - User picks file
 - The path is returned and saved
- Display file in tile
 - Tap on tile opens file





Add photo to task

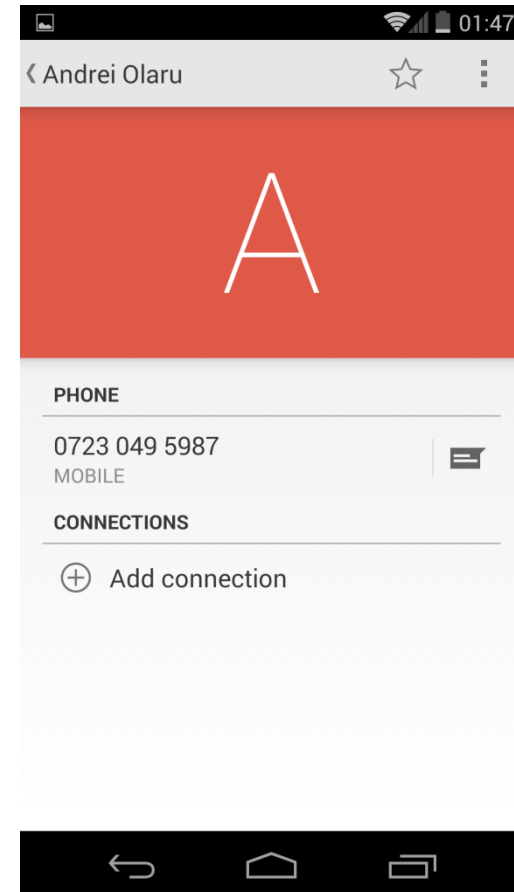
- Control camera
 - Start ACTION_IMAGE_CAPTURE Intent
 - Create file for image data
 - Get result and load image from file
- Display photo
 - Photo is displayed in a tile
 - Tap on tile opens image viewer.





Add contact to task

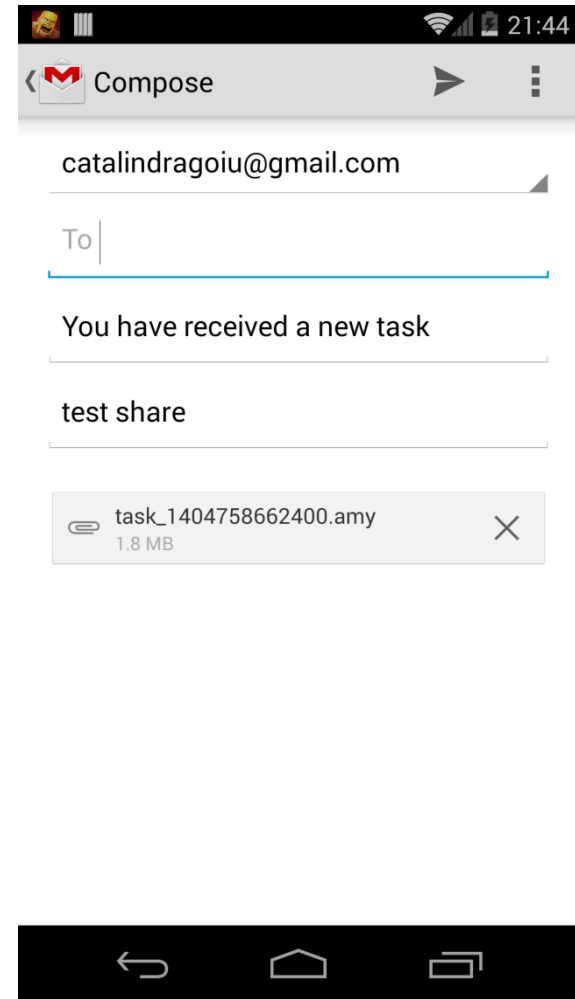
- Contact picker
 - Start ACTION_PICK intent
 - Receive contact ID
- Access contact
 - Query contact database
 - Receive and display data
 - Open contact page on tap





Task Sharing

- Compress task and assets
 - ZIP format
 - AMY extension
 - Send file intent
- Import task
 - Intent filter for extension
 - Extract assets
 - Load task





Evaluation – Android Design principles

- “Real objects are more fun than buttons and menus”
 - Tile grid
- “Keep it brief”
 - Very little text
- “Pictures are faster than words”
 - Tiles are presented as pictures
- “Give me tricks that work everywhere”
 - -Swipe to dismiss



- The project resulted in:
 - Open Source task organizer application
 - Usage examples for Android API's
 - Documentation for Android API's
- Other benefits
 - Custom Android UI elements.
 - Review and implement latest Android design recommendations



Keywords:

Android Integration, API, Files, Photos, Contact,
Notifications, Task organizer, Design Principles
