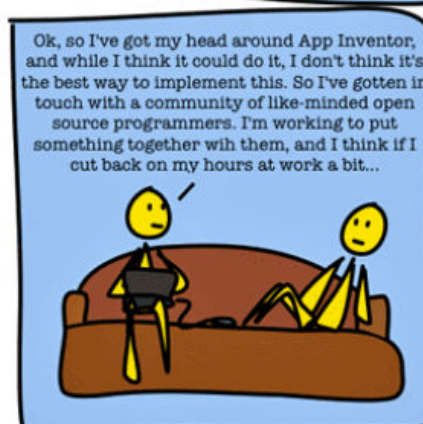
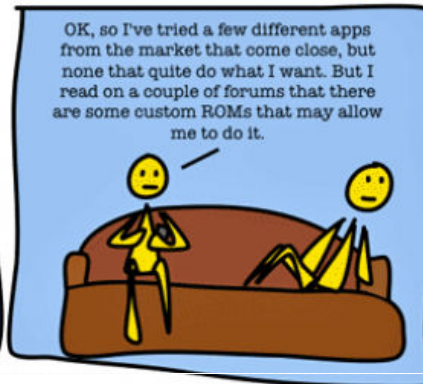


Development Tool for the Android Beginners

Android Development Made Simple

Mark Ha '13
Adviser: Brian Kernighan

Android



iPhone



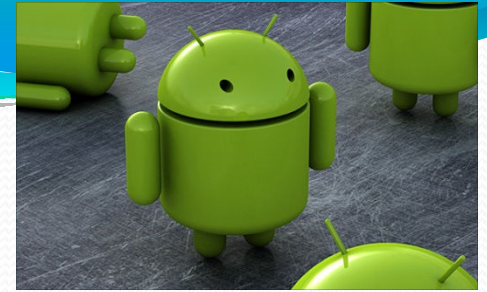
(from cubiclebot.com)

Motivation



- Mobile is hot
- “Entry” cost as an Android developer is relatively high
- No good way to just “try out” Android
- Working with the Android library can be a hassle

Related Work



- App Inventor (<http://appinventor.mit.edu/>)
- “Droid Dev”
- Twill (<http://twill.idyll.org>)

MIT App Inventor **BETA** My Projects Design Learn (Debugging) Welcome to the App Inventor beta preview release. Be sure to check the list of [known issues](#) and [release notes](#) MarkThienAn@gmail.com | [Sign out](#)

HelloWorld Save Save As Checkpoint Add Screen Remove Screen Open the Blocks Editor Package for Phone

Palette

Basic

- Button
- Canvas
- CheckBox
- Clock
- Image
- Label
- ListPicker
- PasswordTextBox
- TextBox
- TinyDB

Media

Animation

Social

Sensors

Screen Arrangement

LEGO® MINDSTORMS®

Other stuff

Not ready for prime time

Viewer

Screen1 Screen2

Display hidden components in Viewer

Screen2

Text for Button1

Text for Button2

Components

- Screen2
 - Button1
 - Button2

Rename Delete

Media

Add

Properties

BackgroundColor

Default

Enabled

☒

FontBold

☐

FontItalic

☐

FontSize

14.0

FontTypeface

default

Image

None...

Shape

default

Text

Text for Button2

TextAlignment

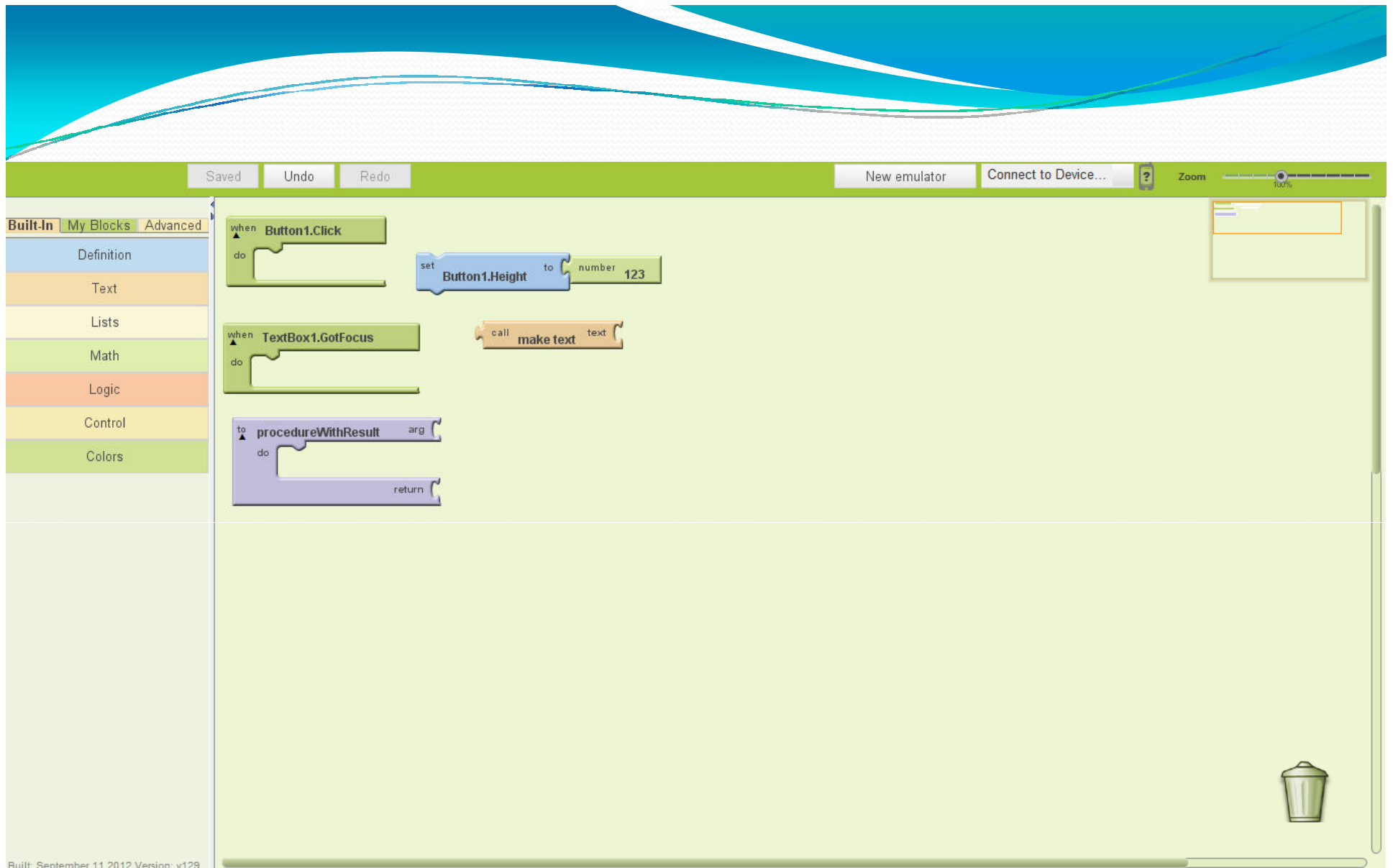
center

TextColor

Default

Visible

(appinventor.mit.edu)



(appinventor.mit.edu)

Plan of Attack



- Related material – how do they do it?
- Core functionality first (cmd line input -> output apk) in a generalized fashion (scalability)
- After that, features (ie. preview emulator screen, beginner demos, GUI)
- Improve based on either user testing or experience
- Repeat

Timeline



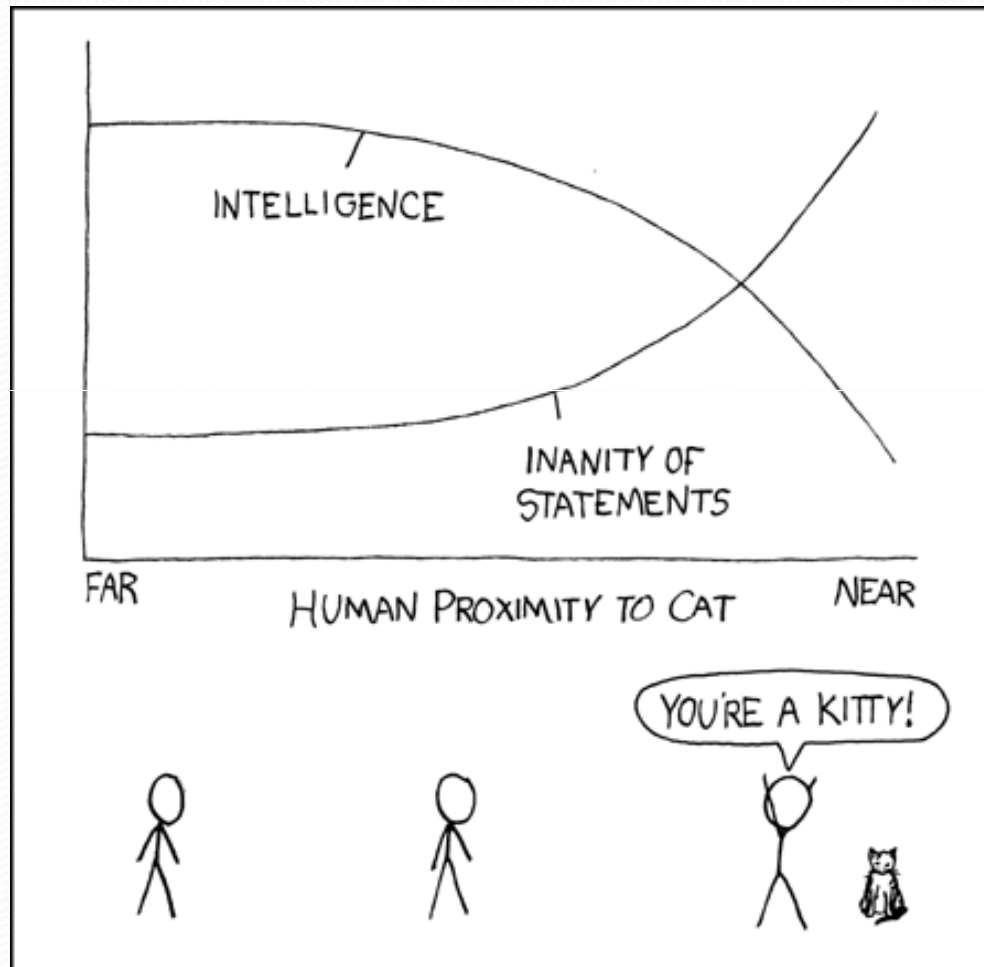
- *October*: “core functionality” for 1-3 simple examples (ie. Button, text field)
- *November*: “end to end” – from the command line to a generated apk file
- *December*: “compile and preview” feature
- *January*: GUI feature (as opposed to command line)
- *February + March*: Improvements, more features TBD
- *April*: Wrap up + Report

Evaluation



- User tests + feedback
 - How many users succeed to make a simple program, and how long does it take them?
 - Do the users have a positive or negative experience using the tool?
 - How many would use it again?

Quantifying my results



(xkcd.com)

Conclusion



- Getting into Android is difficult
- For beginners with no Android experience, but with some programming experience.
- Main functionality is to take some text input and output corresponding code/apk file



ANDROID

Thanks for listening!

Questions? Comments?