

CELLBOTS

CS 2951A

EVAN STITES-CLAYTON

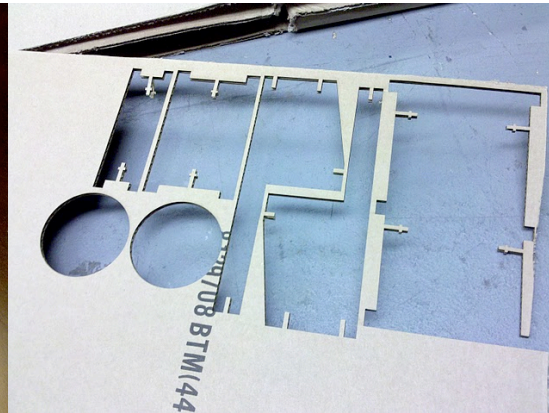


*Cellbots: Using Cellphones as
Robotic Control Platforms*

- *ALLOWS A PHONE TO BE A ROBOT,
NOT JUST CONTROL ONE*
- *STREAMING VIDEO FROM PHONE*
- *TEXT TO SPEECH*
- *REMOTE CONTROL*
- *VARIOUS TECHS DEVELOPED BY*

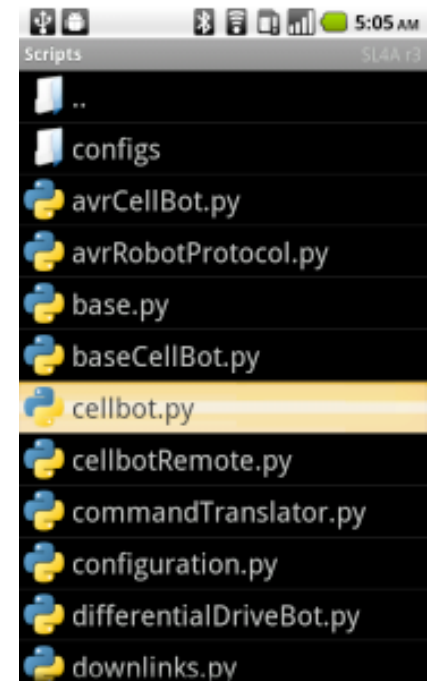
SUPPORTED PLATFORMS

- *ARDUINO BASED ROBOTS SUCH AS TRUCKBOT, TANKBOT*
- *IROBOT CREATE*
- *LEGO MINDSTORMS*
- *VEX PRO COMPETITIVE ROBOTICS*



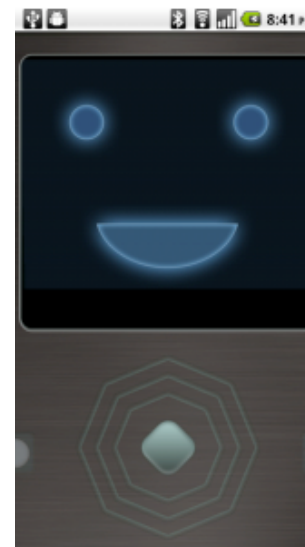
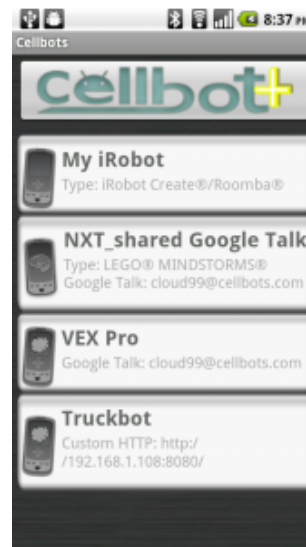
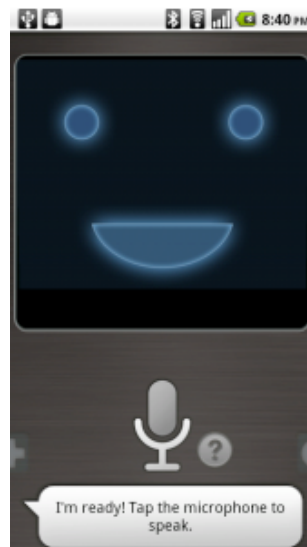
ENABLING TECHNOLOGY: PYTHON

- *ORIGINALLY A SINGLE PYTHON FILE*
- *SCRIPTING LAYER 4 ANDROID*
- *CELLBOTS PYTHON LIBRARY*
- *CONTROL ROBOT OVER GCHAT*
- *SUPPORTS ARDUINO BASED ROBOTS*



ENABLING TECHNOLOGY: JAVA APP

- *OUT OF THE BOX SOFTWARE SOLUTION, IN THE MARKET*
- *FOR ALL SUPPORTED PLATFORMS*
- *BRAIN MODE/REMOTE CONTROL MODE*



JAVA APP: REMOTE CONTROL MODE

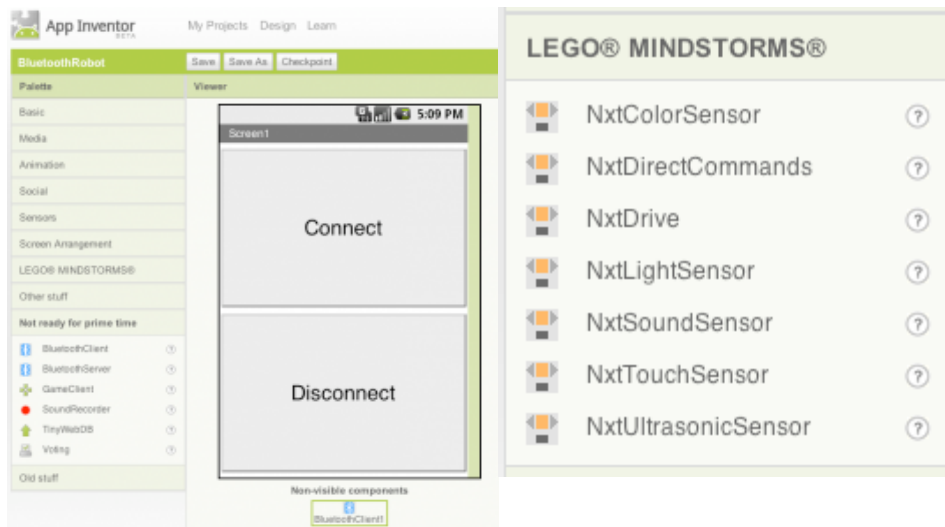
- *D-PAD, JOYSTICK*
- *USE PHONE'S ACCELEROMETER*
- *SENDS OVER BLUETOOTH (25 FT)*

JAVA APP: BRAIN MODE

- *UNLIMITED RANGE (USES INTERNET)*
- *WEB INTERFACE OVER WIFI*
- *STREAMING VIDEO*
- *UTILIZES TEXT TO SPEECH*
- *COMPASS HEADINGS*
- *TAKE STILL PICTURES*

ENABLING TECHNOLOGY: APP INVENTOR

- DRAG AND DROP APP CREATION
- SPECIAL MODULES FOR LEGO MINDSTORMS
- CONNECT WITH TWITTER, TINYWEBDB FOR DATA BASE ACCESS



WHO CAN USE IT

- HTC MYTOUCH, MOTOROLA DROID, HTC NEXUSONE, SAMSUNG NEXUS S, AND OTHER PHONES NOT USED IN TESTING.
- ANDROID PHONES
- ARI KRUPNIK'S IPHONE CONTROLLED HELICOPTER

WHO CAN USE IT: PROGRAMMING

- *APP FOR NON-PROGRAMMERS*
- *APP INVENTOR FOR JUNIOR PROGRAMMERS*
- *PROCESSING FOR BEGINNING PROGRAMMERS*
- *PYTHON, JAVA, BEYOND FOR ADVANCED PROGRAMMERS*

WHO CAN USE IT: ROBOT ENGINEERING

- *OUT OF BOX: IROBOT CREATE*
- *JUNIOR ENGINEERS: LEGO
MINDSTORMS*
- *BEGINNING ENGINEERS: VEX PRO*
- *ADVANCED ENGINEERS: TRUCKBOT,
TANKBOT*

EXAMPLES: SQUIRT BOT

- *AUTONOMOUS/PHONE MODE*
- [HTTP://WWW.CELLBOTS.COM/
ANDROID/WATER-GUN-ROBOT/](http://www.cellbots.com/android/water-gun-robot/)

