

Arduino as Motion Platform AND Game controller

- Arduino sends bluetooth signals to the phone
- Basically build an Arduino bluetooth game controller that also moves a platform.

Arduino as USB-to-Bluetooth Converter

- Super-hard way, Read USB
 - Get stick & button inputs form USB
 - o Translate to Bluetooth
 - o Also move the platform as a side-effect

Input Devices

Lots of options: need to find the right point in the {cool, easy, cheap} space.

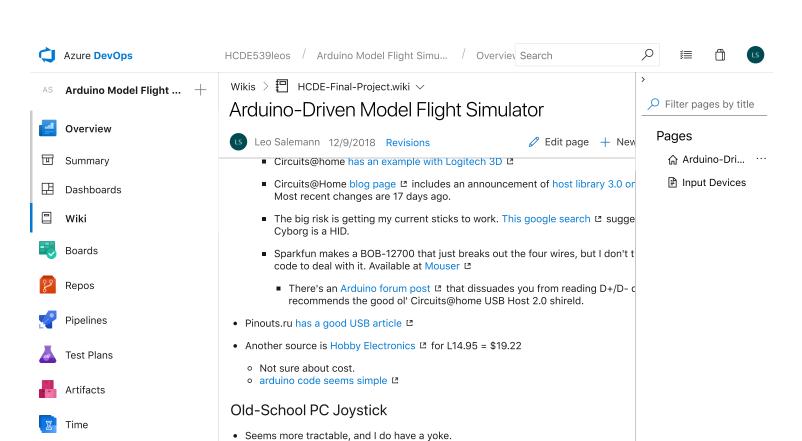
USB Joystick

- The most desirable; the most complex. Seems to require sophisticated boards, a sir probably won't do.
 - Main Arduino discussion post ☑
 - First thing they reference is Gravitech ②, which leads you to their full-size vel leads you to Circuits@home

 ☐
 - Alternate place to purchase site is TKJ electronics \$34 USB Host Shield ☑

 - Has libraries for PS3, PS4, Wii, XBOX controllers
 - Best to look at all of Oleg's Github Repos 🖾 then try USB_Host_Shield_2.0 and
 - Circuits@home has an example with Logitech 3D 🗷
 - Circuits@Home blog page ☐ includes an announcement of host library 3.0 or Most recent changes are 17 days ago.
 - The big risk is getting my current sticks to work. This google search ☐ sugge Cyborg is a HID.
 - Sparkfun makes a BOB-12700 that just breaks out the four wires, but I don't t code to deal with it. Available at Mouser □
 - There's an Arduino forum post 🖾 that dissuades you from reading D+/D- of recommends the good ol' Circuits@home USB Host 2.0 shireld.
- Pinouts.ru has a good USB article

 □
- Another source is Hobby Electronics ☐ for L14.95 = \$19.22
 - o Not sure about cost.
 - o arduino code seems simple 12



• I've got the shield, maybe I can read & parse gamepad data. **Cost Considerations** USB is the highest cost; highest risk

Bluetooth Game Controller

promising pinout link ☑

port-interface.html □)

- Bluetooth is free (I have one), also high risk
- Sampling pins off my PC joystick should work; easy to test.
- Basic Thumb joysticks easiest to buy/use. That's my fallback.

[build its has a blog article with full wiring] (http://build-its.blogspot.com/2012/01/ar

Getting Iterative with Input

- 1. Control one servo with a pot
- 2. Sample pins from PC joystick, see what can be done.
- 3. Control servo with one PC joystick axis
- 4. See what I can read from bluetooth game controller

More links

- connecting gamepad to arduino (uses weird libraries) 🖪

Design Artifacts

TinkerCAD Project 🗷

Even More Links

 $https://allpinouts.org/pinouts/connectors/input_device/joystick-pc-gameport/ \ {\color{red} \Box}$

http://build-its.blogspot.com/2012/01/arduino-game-port-interface.html

https://www.reddit.com/r/arduino/comments/ps71v/why_does_my_servo_make_a_clickin

https://www.wikihow.com/Wire-a-Potentiometer

https://www.tinkercad.com/things/ehMveOlekxN-copy-of-3-servos-driven-by-pots/ed tenant=circuits 2

https://learn.adafruit.com/introducing-adafruit-ble-bluetooth-low-energy-friend/ble-se

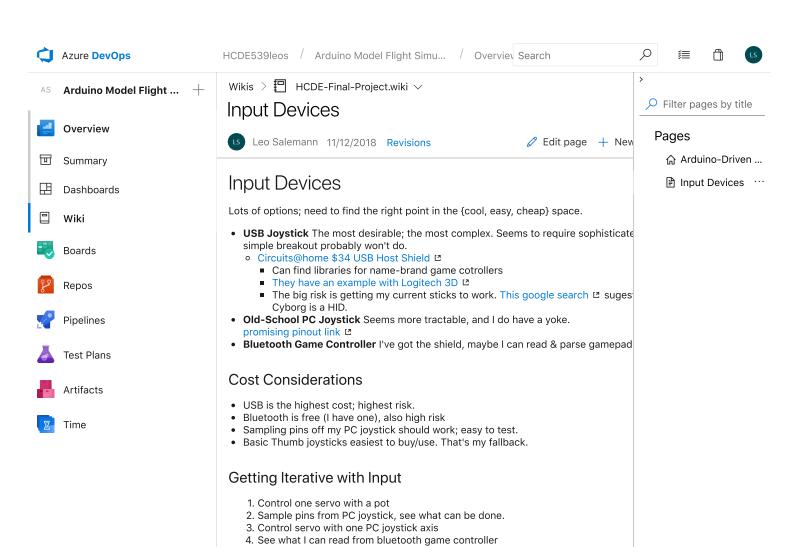
https://learn.adafruit.com/introducing-adafruit-ble-bluetooth-low-energy-friend/ble-se

https://github.com/adafruit/Adafruit_BluefruitLE_nRF51/pull/37/files 🛂

Bluetooth/Bluefruit links

Factory reset https://learn.adafruit.com/introducing-the-adafruit-bluefruit-le-uart-frien

Mouse move https://learn.adafruit.com/introducing-adafruit-ble-bluetooth-low-energy services#at-plus-blehidmousemove-14-35 🗷



4. See what i

connecting gamepad to arduino (uses weird libraries)