Arduino Player Tracking Project (V1.0)
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HARDWARE REQUIRED

Arduino Mega 2560 R3
https://www.amazon.com/gp/product/B01H4ZLZLQ/ref=ppx_od_dt_b_asin_title_s00?ie=UTF8&psc=1

RFID RC 522
https://www.amazon.com/gp/product/B07KGBJ9VG/ref=ppx_yo_dt_b_asin_title_o00_s00?ie=UTF8&psc=1

Cytron WiFi Shield
https://www.amazon.com/gp/product/B01M33YHGF/ref=ppx_yo_dt_b_asin_title_o01_s00?ie=UTF8&psc=1

USB Dual Wall Adapter
https://www.amazon.com/Charger-Adapter-Replacement-Samsung-Motorola/dp/B07437M5QQ

10' USB Cable
https://www.amazon.com/AmazonBasics-USB-2-0-Cable-Male/dp/B00NH11KIK

Compatible vacuum fluorescent display or LCD; if using an LCD then hardware and software modifications will be required. My player tracking bracket has an IEE Vacuum Fluorescent Display 03601-95A-40 – like this one: https://www.ebay.com/itm/192851573499

Dupont M-F jumper wires required (19 or more)

Micro-SD Memory Card

At least 2 RFID cards

Compatible slot machine and BETTORSlots TITO Deluxe board (Tested on IGT machines)

Player tracking bracket with an existing card reader and VF (or LCD) display

WIRING

- The Wifi Shield attaches to the Arduino Mega via the built-in pin headers
- The VFD pins 1-10 should go to data pins 22-31 respectively; VFD Pin 11 to 5V, and Pin 12 to Ground (Assumes IEE Vacuum Fluorescent Display 03601-95A-40)
- The RFID board needs to be wired into data pins 49-53 as follows
    - SDA=53
    - SCK=52
    - MOSI=51
    - MISO=50
    - GND=Ground
    - RST = 49
    - 3.3V = 3.3V

You will need to power the Arduino board from the Accessory outlet in the base of the slot machine using a USB brick that has at least 2 outlets – one for the BETTORSlots TITO board and one for the Player Tracking Board. A 10' USB cable is recommended to reach the top cabinet. It may be possible to get power from the top-cabinet but that is beyond the scope of this document.

INITIAL SETUP

- Assumes you have the Arduino IDE setup and all dependent libraries installed, including
    - IniFile
    - IeeFlipNoFrills; You will need to update the IeeFlipNoFrills.h library with the one included with this package
    - SPI
    - MFRC522
    - CytronWifiClient
    - CytronWifiShield
    - SD
- Format the MicroSD Card as Fat32
- Edit the included config.txt file with your settings and preferences; then copy the file to the SD card
- Insert the SD card into the slot on the Wifi Shield
- Connect the board to your computer and load the ArduinoPlayerTracking Sketch
- Open the Serial Monitor
- Download the software to the Arduino
- Wait for the app to finish initializing
- Place your first card over the RFID reader – it will create a default player tracking file on the SD Card. Note the CardID in the Serial Monitor. This will be your first player card
- Remove the card from the reader and place a different card on the reader. This will create a second player file which you can edit into the System Bonus card. Note the CardID in the Serial Monitor
- Unplug the Arduino; remove the SD Card and insert it into your PC/Laptop. Edit the player tracking files accordingly. Details on the file formats are in the 'Arduino Player Tracking Project - File Formats.txt' file
- After editing the files, replace the SD card in the Arduino
- Mount the hardware into the slot machine's top box. Your specific player tracking bracket and options may vary – use your best judgement on how to mount the hardware. I removed the existing card reader electronics (leaving the slot) and mounted the RFID reader on top of the slot so it can read the cards when inserted. The mounting of your VF (or LCD) display depends on the type of display and the player tracking bracket
- Run the USB power wire down through the cabinet and route it to the accessory outlet
- Power the machine and test

NOTES

- BETTORSLOTS File Modifications may be required on its SD card. Check your SD card for the Data.html file. This file should be blank; otherwise the app will have trouble reading the data
- If using an LCD instead of the IEE VFD then software changes will be required – including adding the LCD library and modifying the showMessageOnVFD and scrollText functions.
- This project uses specific hardware and libraries. It may be possible to switch out the WiFi Shield for another or substitute wired Ethernet – but both will require extensive code modifications and rewiring

PHOTOS