PiBox - Action Item #371
Media Server and Media Player case models

07 Aug 2014 16:56 - Hammel

Status:	In Progress	**Start date:**	07 Aug 2014
Priority:	Urgent	**Due date:**	
Assignee:	Hammel	**% Done:**	30%
Category:	06 - Hardware	**Estimated time:**	0.00 hour
Target version:	1.0 - Atreides		
Severity:	04 - Low		

Description

I need to start work on creating case model files. I've started to learn Blender. Seems easy enough so far. There are some base model files on ThingiVerse.

1. STL layers
2. 3 part case (pretty cool)
3. Raspberry Pi case
4. Adafruit Pi Box - Enclosure for Raspberry PiÂ® Computers
5. Search for cases
6. Berry Simple Pi - simple mounting bracket that can be epoxied to another surface
7. Double Breadboard Case for Raspberry PI
8. Raspberry Pi Model B+ 10cm x 10cm monitor bracket
9. Portable Raspberry Pi Case
10. ModMyPi Mk.2 USB Hub, 2.5" HDD, Patch Bay, On/Off - Ideas - example case

Blender tutorials:

1. Blender For Noobs - Learn Blender in Under an Hour! - Fast track (done)
2. Blender & 3D Printing

Dimensions:

1. RPi B/B+ - 85.0 x 56.0 mm x 17mm
2. AAXA LED Pico Projector - 115mm x 62mm x 20mm
3. Jackery Giant+ - 4.3in x 3.1in x 0.8in

Power Switch ideas:

1. RaspberryPi On/Off Switch Idea
    1. Raspberry Pi On/Off Cable
2. Pi Supply

Related issues:

Related to PiBox - Feature # 385: Build power on/off support HW for Media Player	**Closed**	**11 Sep 2014**

Associated revisions

Revision 5ecf9b3c - 15 Aug 2014 22:05 - Hammel

RM #375, RM #371: Save lsusb output to speed other scripts that need that same output.

Revision 587877e7 - 15 Aug 2014 22:06 - Hammel

RM #375, RM #371: Test for FAVI keyboard and adjust mouse movement and key mappings for X.org.

Revision ff1525e9 - 15 Aug 2014 22:22 - Hammel

Revert "RM #375, RM #371: Test for FAVI keyboard and adjust mouse movement and key mappings for X.org.". This change belongs in the UI repo only, since it applies to the Media Server/Media Player add on packages.

This reverts commit 587877e725226e5ab8325676861e9caf3f7ba10b.

History

#1 - 07 Aug 2014 17:08 - Hammel

- Description updated

- % Done changed from 0 to 10

#2 - 15 Aug 2014 16:03 - Hammel

- Description updated

#3 - 20 Aug 2014 15:39 - Hammel

- Description updated

#4 - 21 Aug 2014 15:07 - Hammel

- Description updated

#5 - 21 Aug 2014 15:09 - Hammel

- Description updated

#6 - 11 Sep 2014 10:01 - Hammel

- Priority changed from Normal to Immediate

#7 - 11 Sep 2014 10:06 - Hammel

- Target version changed from 1.0 - Atreides to 0.10.0

#8 - 11 Sep 2014 14:44 - Hammel

- Status changed from New to In Progress

I now have an idea of how to create a case using Blender and have access to a 3D printer. So I'm going to design my own case for the Media Player to start. The diagram for this can be found in RM #385. Using the diagram I can do the following:

1. Create placeholder objects of the appropriate size in blender for the battery, usb breakouts, battery charger breakout, RPi, cable holds, and projector (maybe - might make it external).
2. Position them where I want them.
3. Add a bottom case to hold them.
4. Create a top case to cover them.

The last two will then be printed without the placeholder objects.

#9 - 14 Oct 2014 17:11 - Hammel

- % Done changed from 10 to 30

I've created a Blender model based on a Dia diagram (which includes dimensions for all components that must be enclosed by the case) for an initial version of the media player case that includes holding the AAXA projector. This has been submitted to a 3D printer at the library and will take some time to return (it's already been a couple of weeks).

However, I now realize that model is wrong and I should be externalizing the projector/display and squeezing the rest of the components into a smaller package. So I'm going to redo the Dia design first, then update the model.

#10 - 29 Dec 2014 12:33 - Hammel

- Target version changed from 0.10.0 to 0.11.0

#11 - 14 Jan 2015 14:21 - Hammel

- Severity changed from 03 - Medium to 04 - Low

#12 - 06 Jun 2015 17:32 - Hammel

Now that I have prototype cases made from wood, I can redesign the 3D models to support that layout, add multi-piece prints that snap/screw together and color plates.

What I should do is design the sides, bottom and top as separate pieces that need to be manually joined (snap fit or screws), and add color plates for design elements that also snap fit or screw onto the front or sides.

#13 - 02 Sep 2016 13:59 - Hammel

- Priority changed from Immediate to Urgent

#14 - 25 Sep 2016 10:23 - Hammel

- Target version changed from 0.11.0 to 1.0 - Atreides

#15 - 16 Jan 2017 13:07 - Hammel

I purchased a Robo3D printer from Best Buy today. They were selling it for $699 but the official web site was having a sale at $599, so Best Buy did a price match. Very cool.

I'll be setting it up and fiddling with it over the next couple of weeks. My wife is also going to use it, so I need to set it up so it works for both Mac and Linux.