Project Scope:

The goal for this project is to allow a user to connect an input HDMI audio-video feed to a Raspberry Pi4, mix the input with other content provided from a third party and then have the final audio-video stream output via the device HDMI to the screen.

The third-party “content” may be text ads, video or images which are retrieved and loaded dynamically to a location on the file system and/or database and/or mem-store (e.g. Redis).

The initial setup of the device will require the user to:

* Login to their account (username and password)
* Set the location of the device (physical address)
* Set the location type (e.g. restaurant, retail, etc)
* Set the device orientation (e.g. landscape or portrait)
* Select the device layout (see below)

Once the device has been “configured” we will then begin sending “content” to the device.

**Note that for the initial project, a simple hard coding of the values needed above to a configuration file is sufficient.**

**Possible Device Layout Options:**

|  |  |
| --- | --- |
| Graphical user interface, application  Description automatically generated with medium confidence | Graphical user interface, application  Description automatically generated |
| Graphical user interface, application  Description automatically generated | Graphical user interface, application  Description automatically generated |

The “Content” is reflected on screen in the applicable areas labeled as “ADS”

This content needs to “slide in” and “slide out” as appropriate.

A configuration JSON will be provided with each dynamic ad including:

|  |  |
| --- | --- |
| AdName | Reference Ad Name (not shown on screen) |
| AdType | VIDEO, SCROLL, URL, IMAGE |
| AdPath | Full path or URL of retrieval of ad |
| AdDuration | Amount of time shown on screen |
| AdQRPath | Path to QR code to super impose on screen |