Client device Design

V1 3/29/2013

We want the client device (e.g. Roku, ps3, connectedTV) software to be as simple as possible because we will have to support an ever increasing number of different connection devices. We want to be able to quickly implement a new TV or roku type device.

Terms:

Client – device like Roku, PS3 which connects to internet and display device

Server – cloud based server infrastructure which serves up images for display

Viewlist – fixed list of images which will be displayed

Release Versions:

0 – basic demo to show to potential investors and device manufacturers

.5 – simple functional system to give to 25 “friends” to play with and give us feedback

1.0 – first system which real users can use

Basic V0 features of client:

The basic idea is that the user is seeing a series of images which sequentially appear on their display device. The series of images queued for display on the server is called a *viewlist*. The client software function is to connect to the server, receive an image and display it on the connected display. At some time the server will send another image to the client to replace the currently displayed image. In V1 there is no control of what image is being displayed from the client, advancing to the next image is only a server function

Client functions

1. Connect to server and identify itself. Each client has a unique identification
2. Receive image from server and send it to connected display
3. Wait for new image and repeat

Advanced V.5 features of client:

1. Enable forward and back native buttons on the client remote. It will be very useful for the user to be able to easily move forward and back in the viewlist by just using the device remote left and right buttons.
2. Display work name and artist for short period when new image appears. When a new image appears display an overlay of the name of the image and the artist name. This overlay is only for 5 or 10 seconds and then disappears. If you want to know what image you are looking at you can simply go back and forth in the viewlist and the name will appear.
3. Enable another button on the device remote to also display the name/artist when pushed

V1.0 features of client

1. Preload images in viewlist onto client. To speed performance, if the client is capable, download a series of images into the client so moving to the next image is virtually instant.

Future features

1. Lo/High res images. To speed up the display of images, server first sends down a low-res version of the image so the screen pops quickly. Then in background, the server sends down the high-res version which replaces the low-res image. This will make moving through the viewlist fast and only when you stop on a picture will the high-res version be sent.
2. Implement John’s image compression technology to speed image delivery