

Live Feeds and Heat Maps

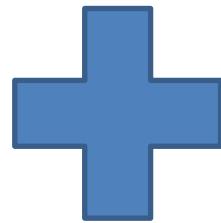
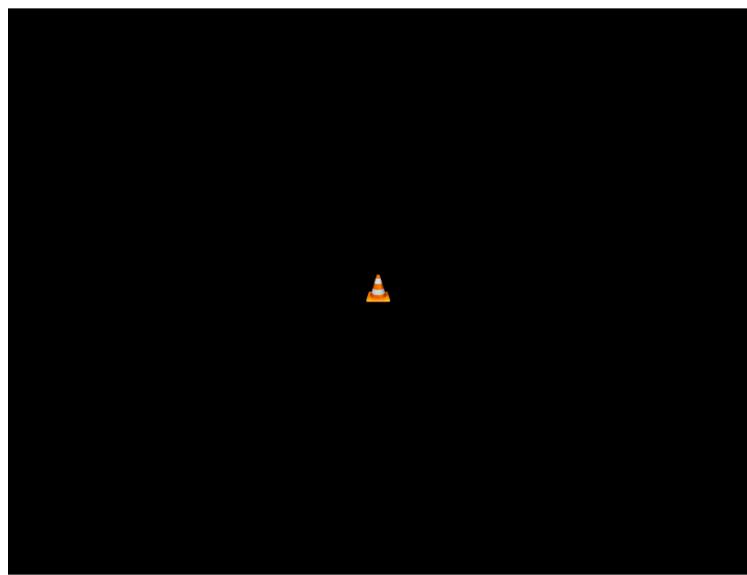
User Interface Team

Jin Bai

ECE479: Senior Participation in VIP

Purdue University

Live Camera Feed



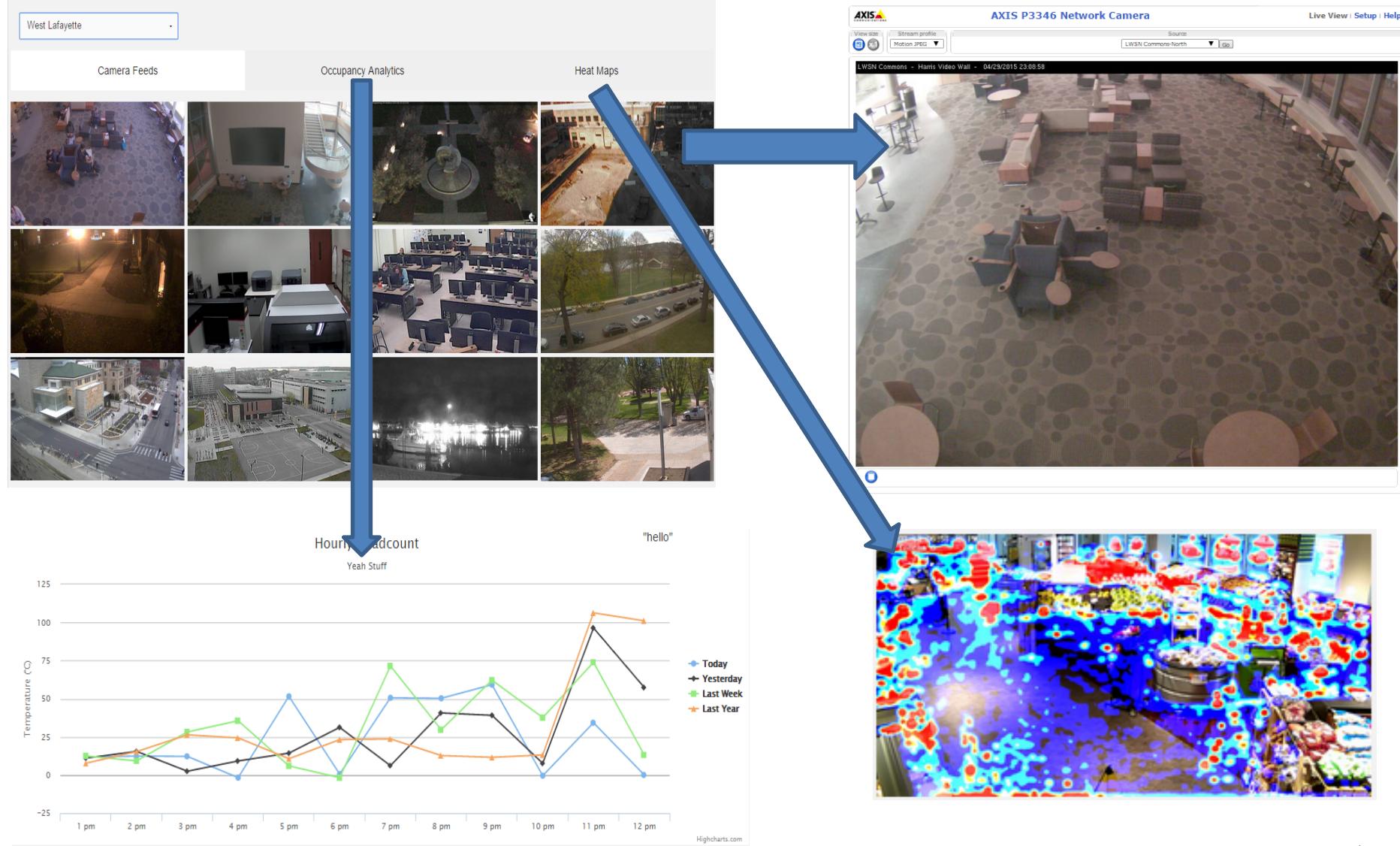
What are the problems?

There are numerous video players out there. How does any organization decide which is best for them? Which one should we pick?

Factors to consider:

1. Support, does the player support our purposes?
2. Accessibility, is the player readily available online
3. Cost, possible fees for using the player

Why am I'm I doing this?



Grid

Block Grid

Interchange Responsive Content JS

Utility Classes

Javascript Utilities

Right-to-Left Support

NAVIGATION

Off-canvas JS

Top Bar JS

Icon Bar

Side Nav

Magellan Sticky Nav JS

Sub Nav

Breadcrumbs

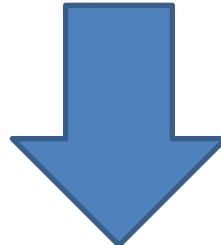
Pagination

Basic

You can create a flex video with minimal markup.

HTML

```
<div class="flex-video">
  <iframe width="420" height="315" src="//w
</div>
```



RENDERED HTML



```
<embed type="application/x-vlc-plugin" name="VLC" autoplay="yes" loop="no" volume="100" width="640" height="480"
target="rtsp://{{cam_ip}}:554/axis-media/media.amp?videocodec=h264">
```

```
<OBJECT CLASSID="clsid:02BF25D5-8C17-4B23-BC80-D3488ABDDC6B" WIDTH="640" HEIGHT="480" CODEBASE="http://www.apple.
com/qtactivex/qtplugin.cab">
<param name="SRC" value="poster.mov">
<param name="QTSRC" value="rtsp://{{cam_ip}}:554/axis-media/media.amp?videocodec=h264">
<PARAM name="autoplay" VALUE="true">
<param name="type" value="video/quicktime" height="256" width="320">
<EMBED
  TYPE="video/quicktime"
  SRC="rtsp://{{cam_ip}}:554/axis-media/media.amp?videocodec=h264"
  WIDTH="640"
  HEIGHT="480"
  AUTOPLAY="true"
  PLUGINSPAGE="http://www.apple.com/quicktime/download/">
</EMBED>
</OBJECT>
```

The Axis camera's RTSP url take the form:

Code:

```
rtsp://[camera-ip-address]:554/axis-media/media.amp
<
```

Where [camera-ip-address] is the ip address of the Axis camera.

What major problems did you encounter?

1. Successfully getting the stream to play seamlessly, without the stream interface



2. Finding the correct stream format, as this isn't like embedding a normal video. Streams must follow correct RTSP formats.

- http://www.axis.com/files/manuals/um_p1311_40502_en_1009.pdf
- <http://www.wowza.com/forums/content.php?102-Common-IP-Camera-RTSP-URL-formats>



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Heat Map Display



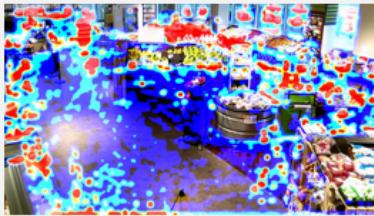
City Market

What have you accomplished?

West Lafayette

Camera Feeds Occupancy Analytics Heat Maps

Mar-19-2015 from 06:00 PM to 07:00 PM



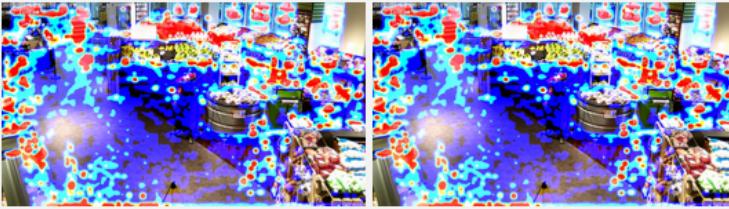
A heat map visualization showing occupancy analysis over time. The map displays a grid of colors representing occupancy levels, with red indicating high density and blue indicating low density. The visualization is overlaid on a camera feed of a store interior.

I set up the structure and Kyle fixed all of the bugs such as image not loading

West Lafayette

Camera Feeds Occupancy Analytics Heat Maps

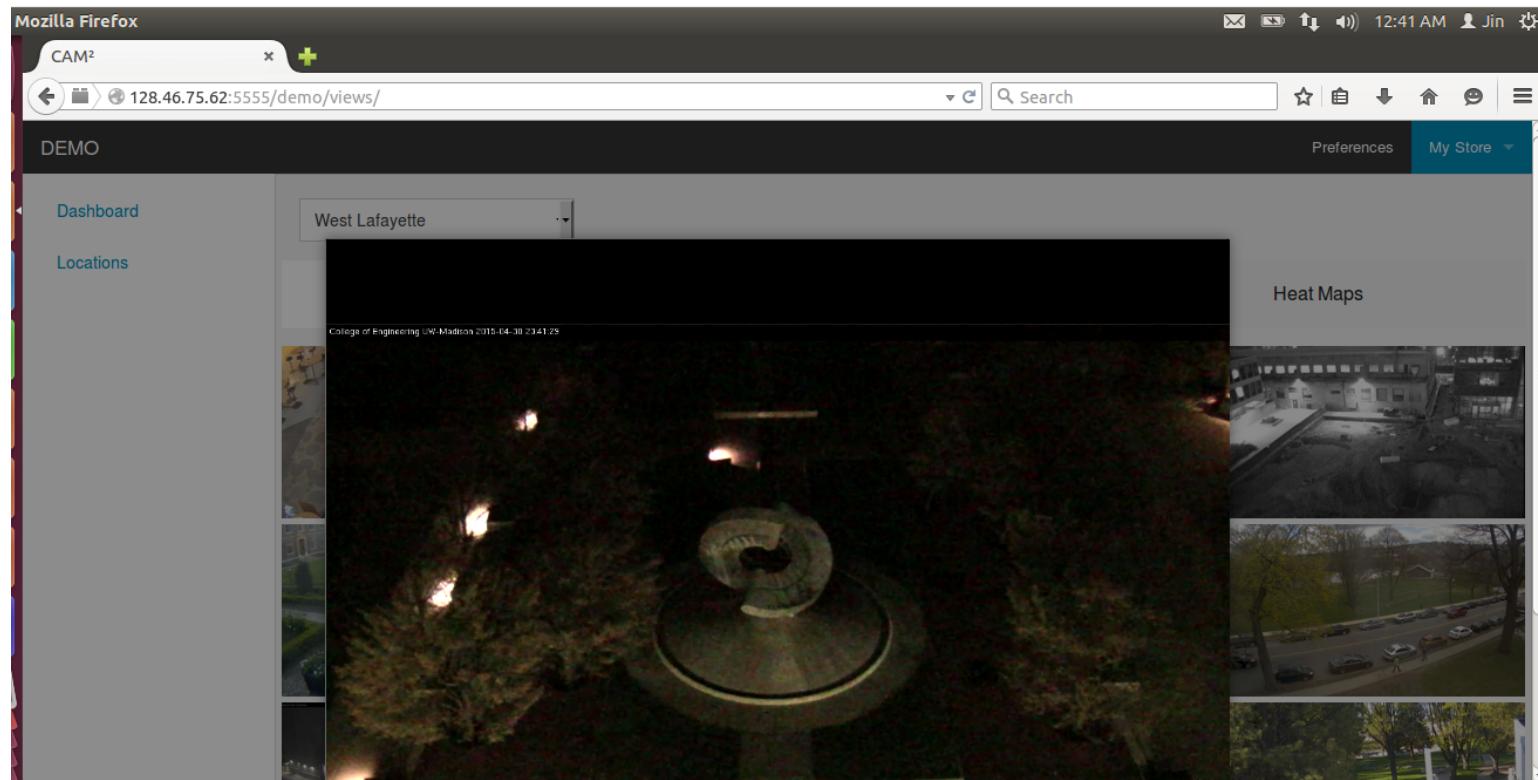
Mar-19-2015 from 06:00 PM to 08:00 PM



Two side-by-side heat maps showing occupancy analysis at different times. Both maps display a grid of colors representing occupancy levels, with red indicating high density and blue indicating low density. The visualizations are overlaid on camera feeds of a store interior, showing the progression of occupancy over time.

What are the remaining problems?

Integrating the live camera feed into the structure of our entire web app



How do you solve the problems?

```
<!-- MODAL FOR TAB1 - VIEWING LIVE CAMERA STREAM -->
<div id="liveModal" style="background-color:black; padding:0em 0em 0em 0em" class="reveal-modal medium" data-reveal aria-labelledby="liveModalTitle" aria-hidden="true" role="dialog">
  <!--<a class="close-reveal-modal" aria-label="Close">×</a-->
  <div>
    <embed id="player" type="application/x-vlc-plugin" name="VLC" autoplay="yes" loop="no" volume="100" width="720" height="520" target="">
  </div>
</div>
```

```
<!--tab 3 heat maps-->
<div class="content" id="panel3">
  <div class="large-10 large-centered columns">
    <div class="row">
      <div class="large-2 medium-3 columns left">
        <label>
          <select id="heatmap-startDate">
            <option value="0">Select a Date</option>
            {% for d in heatmapDates %}
              <option value="{{ d }}">{{ d }}</option>
            {% endfor %}
          </select>
        </label>
      </div>

      <p class="large-1 columns">from</p>

      <div class="large-2 medium-3 columns left">
        <label>
          <select id="heatmap-startTime" disabled>
            <option>Select a start time</option>
          </select>
        </label>
      </div>

      <p class="large-1 columns">to</p>

      <div class="large-2 medium-4 columns left">
        <label>
          <select id="heatmap-endTime" disabled>
            <option>Select a end time</option>
          </select>
        </label>
      </div>
    </div>
  </div>
</div>
<div>
```

Kyle took the initiative to start the initial piecing of our parts.

Evidence of my work

The screenshot shows a GitHub repository page for the 'BigData' repository. At the top, it displays the following metrics: 2,746 commits, 17 branches, 1 release, and 38 contributors. On the left, there's a sidebar with a 'Switch branches/tags' dropdown menu. The 'Branches' tab is selected, showing a list of branches including 'S2015', 'aanjaria', 'akaseb', 'archive_data', 'camera-menu', 'data-graphing', 'data-stream', 'development', 'eventcam', 'integration', 'liveCamPage', 'master', and 'README'. The 'liveCamPage' branch is currently selected, highlighted with a blue background. The main content area shows a list of recent commits from the 'liveCamPage' branch:

Commit Message	Date
data into liveCa...	latest commit ffff1f45986
with opencv 2.4.10	5 months ago
ub:luyunghsiang/BigData into liveCa...	5 months ago
ter branch	5 months ago
to image processing	26 days ago
old code out of the way and rename...	3 months ago
old code out of the way and rename...	3 months ago
old code out of the way and rename...	3 months ago
to reflect the repo reorg	3 months ago
	7 months ago
	5 months ago
removed old Svn file, added directory for image team	3 months ago

On the right side of the page, there are links for 'Issues' (30), 'Pull requests' (0), 'Wiki', 'Pulse', and 'Graphs'. Below these, there's an 'HTTPS clone URL' field containing the URL <https://github.com/>, with options to 'Clone in Desktop' or 'Download ZIP'.