Overview

The VP IT requested that the College IT Administrators Council (CITAC) provide technical recommendation for digital signage on campus. One member each from the Colleges of Natural Sciences, Business and Liberal Arts volunteered to study the issue as a sub-committee. After investigating existing campus installations and determining what solutions and standards exist in industry, the sub-committee made a technical recommendation (Appendix A). The solution requires that each unit on campus with "digital signage" (defined as any digital screen 30" or larger that displays in a public place, not in a classroom) shall have a simple RSS feed built in so that a single message can be sent from CSUPD to be displayed on all digital signage on campus. An IT professional from the Warner College of Natural Resources developed proof of concept code (Appendices B, C and D) and demonstrated to members of CITAC as well as members of the Public Safety Team (http://safety.colostate.edu/public-safety-team.aspx). The recommendation addresses critical emergency notification concerns, is simple to implement, maintains maximum flexibility for units on campus and costs very little to implement.

Implementation

Systems

The existing "feed-submission" proof of concept code will be modified and maintained centrally on a secure server. The server account will only allow specific authenticated personnel (ex: CSUPD) to send a message to digital signage on campus. Due to the complexity of security, the security will be managed centrally.

Data

CSUPD will maintain a database of all digital signage that includes pertinent information such as location, responsible department and contact information. CSUPD will periodically test the RSS feeds to the signs to ensure they work properly.

Signage Maintenance

All digital sign owners are required to register their sign with CSUPD and implement the RSS feed. The support of the feed and sign is a departmental responsibility.

Policy

It is recommended that once the solution is in place and completely vetted, that the University Public Safety Team enact a policy to require all digital signage on campus to adopt the recommendations in this report.

Policy Directives

1. Digital signage is defined as any digital screen 30" or larger that displays in a public place.
2. CSUPD will maintain a database that lists in sufficient detail all digital signage on campus.
3. CSUPD will distribute the code required for the RSS feed.
4. Central IT will develop and maintain the RSS feed submission process and the RSS feed display code.
5. Central IT will provide and maintain the RSS aggregation system on a site available to the CSUPD.
6. All units on campus will identify and report (Appendix E) digital signage under their control to CSUPD. The report will include sufficient elements of information required to identify system information and responsibility as determined by CSUPD.
7. CSUPD will issue a registration sticker for each digital sign.
8. Sign owners will affix the sticker in a visible area (front, lower right hand side) so that CSUPD can see it is registered during their normal patrols.
9. All signage not reported will be assigned a responsible unit for ownership.
10. Any additional signage proposed will have a responsible unit assigned before it is installed.
11. Responsible units are required to incorporate the RSS feed into their digital signage.
12. CSUPD will work with units on campus to periodically test the system.

Digital Signage Technical Recommendation, version 1.0
CITAC Digital Signage Committee (Jon Schroth(COB), Chris Ketterman(CLA), Jim Cox(CNS))
February 4, 2010

The purpose of this recommendation is to establish minimum, cost-effective requirements for campus-wide digital signage usage to facilitate a scalable and optimized foundation for health and safety purposes.

There are two options for standardizing the digital signage. The first option would be to require all screens to use a common vendor so that management of the digital signage could be delegated to proper departments, and access can be given to the police department to post messages in cases of emergency. The second option is to require all digital signage on campus to give the police department the ability to place emergency messages on their signage.

Option one has the benefit of being a common vendor, so all screens can be managed, and content can even be shared among all of the screens if departments desire. It has the drawback of being expensive, does not count in the existing deployments of digital signage, and locks everyone into a single vendor (sole source issues).

Option two is inexpensive and the most flexible, and will allow departments to use their own vendors. The only requirement would be that the sign would have to accept RSS feeds.

This committee recommends that a campus database be established to track all public digital signs. This database would contain the building, location, hours of operation, and owner of the sign. Zones could be established so that messages could be sent to specific zones, rather than to all signs. Our recommendation is that all of these signs would be required to a common RSS feed that the police department could then publish something and would appear on all of the screens. It is also the recommendation of this committee that a periodic audit of signs & messaging to confirm compliance and functionality, and that an interface is created so that the Police Department or other entity as designated by the President can publish emergency messages.
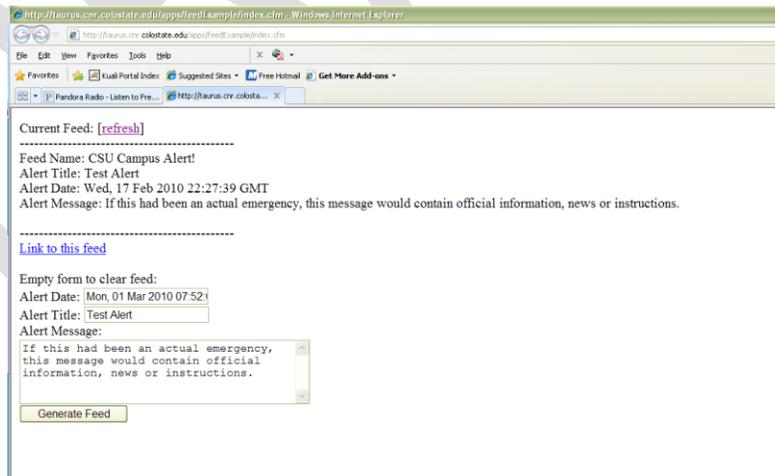
A digital sign at CSU will be defined as a screen 30" or larger, located in a public common space, and used for displaying common information, not, for example, used for displaying meeting room schedules.

Appendix B

Proof of concept - Feed submission page
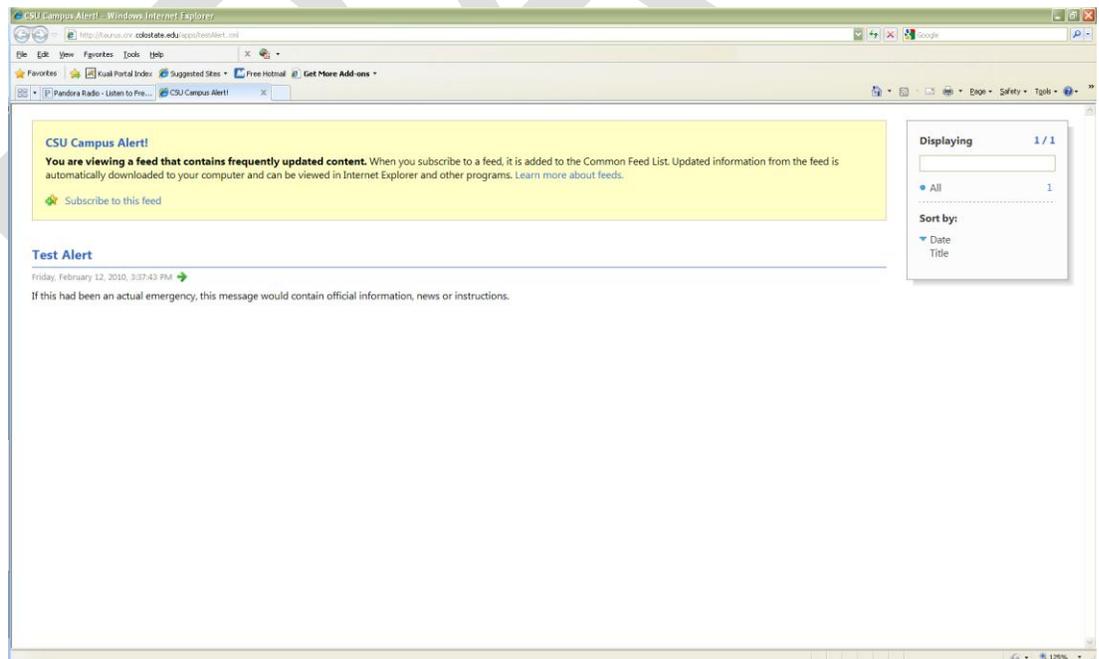
Author: Chris Dicamillo (WCNR)

```
<html>
<body>
Current Feed: [<a href="index.cfm">refresh</a>]<br>
---------------------------------------------<br>
Feed Name: CSU Campus Alert!<BR>
Alert Title: Test Alert<BR>
Alert Date: Wed, 17 Feb 2010 22:27:39 GMT<BR>
Alert Message:
        If this had been an actual emergency, this message would contain official
information, news or instructions.
              <BR>
<br>---------------------------------------------<br>
<a href="http://taurus.cnr.colostate.edu/apps/feedExample/Feedtest.xml"
target="new">Link to this feed</a>
<form action="index.cfm" method="post">
Empty form to clear feed:<br>
Alert Date: <input type="text" name="alertdate" value="Mon, 01 Mar 2010 07:39:13"
readonly><br>
Alert Title: <input type="text" name="alertsubject" value="Test Alert"><br>
Alert Message:<br><textarea name="alertbody" rows="5" cols="40">If this had been an
actual emergency, this message would contain official information, news or
instructions.</textarea><br>
<input type="submit" value="Generate Feed">
<input type="hidden" name="step" value="write">
</form>
</body>
</html>
```

Appendix C

Proof of concept - Feed display page

```xml
<?xml version="1.0" encoding="ISO-8859-1" ?>
 <rss version="0.91">
 <channel>
 <title>CSU Campus Alert!</title>
 <link>http://warnercnr.colostate.edu/</link>
 <description>RSS Feed for Campus Alerts</description>
 <language>en-us</language>
 <image>
 <title>Campus Alert Test</title>
<url>http://warnercnr.colostate.edu/images/stories/front_page_news/watershed50th_
100.jpg</url>
 <link>http://warnercnr.colostate.edu/</link>
 <width>25</width>
 <height>23</height>
 </image>
<item>
 <title>Test Alert</title>
 <link>http://warnercnr.colostate.edu/</link>
 <description>
If this had been an actual emergency, this message would contain official information,
news or instructions.
 </description>
<pubDate>Fri, 12 Feb 2010 15:37:43 MST</pubDate>
 </item>
</channel>
 </rss>
```

Proof of Concept - Digital Signage Emergency Message as Displayed in the Warner College of Natural Resources atrium

Digital Signage Registration Form

In order to provide a safe environment for campus, the Public Safety team requires that all digital signage on campus (defined as a digital display measuring 30" diagonally or larger and placed in a location viewable by the general public (does not include classrooms) so that emergency messages be sent across campus from CSUPD.

Name of individual or group responsible for maintaining the sign:

Home Department:

Contact Number:

Digital Sign Location (Building and Closest Room):

Digital Sign Model:

Digital Sign Serial Number:

Digital Sign Size (Diagonal Measurement):

Digital Sign Host Type (Computer, Other Device?):

How is Content Fed (Web Page, …?)?: