

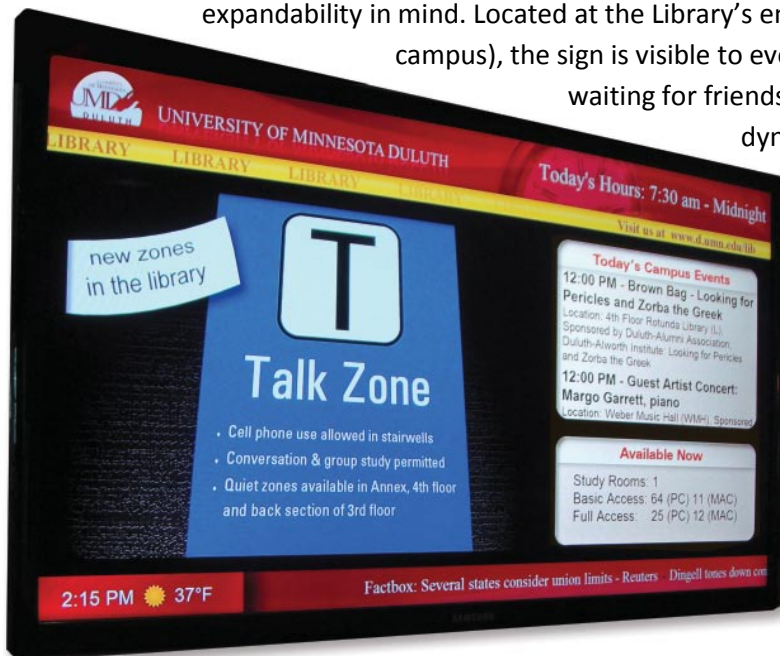
Digital Signage with open source software

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<http://z.umn.edu/dgtl>

In the Fall of 2010 the UMD Library staff at the University of Minnesota in Duluth installed a digital sign with expandability in mind. Located at the Library's entrance (which also happens to be an entrance to campus), the sign is visible to everyone coming in and to those who mill around waiting for friends, rides, and so-on. A digital sign is a type of dynamic billboard or poster that can be remotely

updated over the internet. The UMD Library runs their system on an in-house Linux server using the free open source Xibo (pronounced eX-E-bo) client/server solution. The visuals are designed in Photoshop, with animations done via Powerpoint. The wall-mounted 52" LCD TV is an effective way to reach a lot of people in a high-traffic area and has been great for promoting library and campus-wide services and events.



WHAT'S BEHIND EACH REGION ON THE SCREEN:

HOURS TICKER (TOP RIGHT): <http://.../digitalsign/hours.php>

TODAYS' CAMPUS EVENTS TICKER SCROLLING UPWARDS: <http://pipes.yahoo.com/>

EMBEDDED CLOCK This is a Javascript file pasted inside Xibo

RSS NEWS TICKER: <http://news.google.com/news?pz=1&cf=all&ned=us&hl=en&topic=h&num=6&output=rss>

WEATHER SYMBOL AND TEMPERATURE TICKER <http://.../digitalsign/weather.php>

AVAILABLE NOW: (Embedded)

```
<div id="avail"></div>
<script type="text/javascript">
function updateAvail() {
  http.open("GET", "http://.../digitalsign/roomspcs.php", true);
  etc
}
```

THE MAIN REGION: Powerpoint. This could also be a Powerpoint followed by a video or anything you want.

PLANNING:

Scope of project, start small? | What type of information?

Non-networked or networked? | Need external content feeds?

Interactive touchscreen or not? | Budget? Free Xibo or Concerto .

Wall, ceiling, pole mount, or projected ? | Designate staff for maintenance.



For main region: animated PPTX

SOFTWARE / HARDWARE

Xibo was chosen because it was free, open source, and allowed videos, scheduling, web-based control, and could run Powerpoints with custom timing. We have no monthly fees, but there were costs associated with the 52" TV monitor, wall-mount kit, wiring, and Linux Server which feeds the show to the TV. The background and slides were designed in Photoshop, and animation was done with Powerpoint.

POLICY

The Library designated a contact person for receiving requests and timeframes for ad-space. Once approved, the requests go to staff who do artwork and animation, then upload the files. Requests can be made by the Library, campus departments, student organizations, and other affiliates that the library supports.

TIPS:

1) See if you can have a PC close to the display panel, to simplify wiring. **2)** Don't want it to look like "Powerpoint?" Instead of using standard Powerpoint backgrounds, disguise it with rich graphics. You can still use Powerpoint to animate graphics on top of graphics. Movement is important in digital signage. **3)** Keep it simple—not too text-heavy. **4)** *Update often!*

FUTURE:

Later we may consider adding digital signage to other floors, or even a separate touchscreen digital map system. Another idea that may be explored is using our many PC desktops for digital signage.

WHAT IS XIBO? <http://xibo.org.uk/> Open source, multi-display, multi-zone, fully scheduled digital signage solution controlled from a centrally managed web interface. The basic steps are this: LAYOUT → CONTENT → SCHEDULE → DISPLAY. It is very flexible, handles RSS best in our view, allows video, and has a strong admin interface for layout creation. Xibo uses layouts with multiple regions to display various content. XIBO can have 2 layouts scheduled at the same time, and will cycle through these layouts. One can be video, the other not. For an evening-only event, you can create a new layout for greeting visitors, and then schedule it to automatically display itself in the evening.

XIBO CAN RUN:

Images, Videos, Text, Flash, Powerpoint, Embedded Web Pages, Tickers (RSS, Yahoo Pipes), Embedding of Scripts, PHP, HTML, and MicroBlogs

XIBO's TECHNICAL CONSIDERATIONS:

The Xibo Client should be installed on each display so it can collect and display the scheduled content on the TV or monitor. Xibo stores all the content you schedule for display on the server. At this time, the Xibo Client only runs on Windows, but they are working on this.

The Xibo server should run on any platform that can run Apache, PHP and MySQL. It has only been tested on GNU/Linux (Ubuntu 8.10) and Windows platforms. The Xibo server requires a PHP-enabled webserver (e.g., Apache), and MySQL, as well as some SQL extensions.

OTHER SOFTWARE AVAILABLE: *(a small sampling)*

Concerto (open source) <http://www.concerto-signage.com>

Retriever Digital Signage (pay) <http://www.drmretriever.com>

Carousel by Tightrope Media Services (pay) <http://www.trms.com>

Exhibio (pay) <http://www.exhibio.com>

Four Winds Interactive (pay) <http://www.fourwindsinteractive.com>