Portal Integration
What Works at Plymouth State University
IUG 2005 – San Francisco

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Plymouth State University
Lamson Library
Building on past work

The library’s involvement with the campus portal began during the early stages of considering portal vendors in 2000 and 2001.

The portal went live in Summer 2002 and we presented our work at IUG 2003 in San Jose.
Once in the portal, patrons have access to a number of resources without being asked for authentication information.

- Access to WAM-proxied databases is transparent, just click the link!
- MyMillennium features, like self-service access to the patron record and renewing books is easy too!
- Contact information is pre-loaded in ILL forms, and the portal is used to authenticate patron status before the request can be submitted.
What’s new?

- Changed student information systems (now Banner)
- Changed portal platform (Web Platform to Luminis)
- Billing integration
- Implementation of “roles”
- Awareness of identity management as a barrier to further progress
Identity management?

A way of authenticating a patron and asserting that authentication info to other systems

A way of sharing information about who the patron is and what he or she can do (or, what groups/roles the patron is part of)
Campus Pipeline’s “roles” are similar to III’s patron type...

...but unlike patron type, each user can have multiple roles.

Within the portal, roles can be used to target specific content for different types of users.
Demo & Walkthrough
What's New:

**Go Green!** Information on sustainability and other environmental issues.

Check out our free trials to eHRAF collections in **Ethnography** and **Archaeology**.

**New Titles** added February 1st - February 28th

Earlier news is available in our [news archive](http://www.plymouth.edu/library/).

### Lamson Library Celebrates National Library Week

Celebrate National Library Week at Lamson Library! Activities will take place throughout the week of April 10-15 2005, and there will be gifts, raffles and refreshments!

**All week:**
- Any time you check out a book or ask a question at one of our three desks (Circulation, Periodicals, or Reference), you will receive a prize!
- Fill out raffle tickets for a $50 gift certificate to Barnes & Noble Bookstore. Drawing will be held Thursday, April 14th.
- For non-PSU library users, come in and get a library card good for one year for FREE!

**Monday April 11**

Join the library staff for coffee from 8-10:30am on the Main Level of the library. Fill out raffle tickets for a $50 gift certificate to Barnes & Noble Bookstore.

**Tuesday April 12**

The pre-school and kindergarten classes from the PSU Child Development and Family Center have been invited to visit the library for a story hour, snacks, and book activities.

**Thursday April 14**

Celebrate libraries at a cake and punch reception, 3-4:30pm on the Main Level of the library.
Welcome Nathaniel C. Bisson
You are currently logged in.

Campus Announcements
- Computer Store - Special Dell Deal!
- Professor Okrant to Sign Newest Novel April 12
- PSU Professor discusses Living with ALS
- More Campus Announcements...

Personal Announcements
- Fair Trade Coffee 4/11/05-4/15/05
- Support PSU Earth Week 2005
- The Impacts of NAFTA
- More personal announcements...

PSU WebCam and Weather
At 10:16 AM EDT (04/11/05), the Plymouth conditions were:
- Temperature: 40.3°F
- Dewpoint: 12.0°F
- Relative Humidity: 31%
- Wind: NW at 7.3 mph
(WebCam is Live from Samuel Read Hall Residence Hall)

Computing Resources
- My Drive
- Change Password
- Help

My Drive Quota Usage
- Total: 190 MB
- Remaining: 280 MB

Print Quota Usage
- Pages: 350 Pages

Bookmarks
- Plymouth State University Homepage
- PSU Site Index

Directory Search
- Search By: Students, Faculty and Staff
- Search Name: Last Name

My Calendar
- You have 0 events in your calendar today.
- Campus Calendar and Room Reservation System
Tabs appear based on role
Personal announcements targeted to role, class enrolment, or individual user...
Welcome Nathaniel C. Bisson
You are currently logged in.

Welcome > Lamson Library

Quick Links
Library Home
Online Resources
Journal Articles
Newspaper Articles
Other Databases
Course/Research Guides
Library Instruction/
PS & IAC
Theme Year Resources
Style Guides
Web Sites
By Subject
Quick Reference
Other Libraries

Library Information
Hours
Library Directory
Interlibrary Loan
News Archive
My Account/
Renew Books

Intranet
Room Schedule
Web Site Statistics
Billing Admin

Edit Tools
Authenticated as

Search LOLA (Library Catalog):

Select Search Type:

Advanced Search

What’s New:

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Welcome Nathaniel C. Bisson
You are currently logged in.

Welcome > Lamson Library > Online Resources

Search LOLA (Library Catalog):

Select Search Type: 

Advanced Search

Online Resources

Journal Articles:

EBSCOhost includes: (click EBSCOhost to search more than one of the EBSCO databases.)
- [Academic Search Premier](INFO) [many full-text] START HERE! Largest. All subjects.
- [American Humanities Index](INFO) (many full-text)
- [Business Source Premier](INFO) (many full-text)
- [Clinical Pharmacology](INFO)
- Communication & Mass Media Complete (many full-text) [INFO]
- [EBSCO Animals](INFO) (all full-text)
- [ERIC](INFO) (links to full-text)
- [Funk & Wagnalls New World Encyclopedia](INFO)
- [Health Source: Nursing/Academic](INFO) (many full-text)
- [NEW! Library Literature & Information Science](INFO) (links to full-text)
- [MAS Ultra--School Edition](INFO) (for high schools; many full-text)
- [MEDLINE](INFO) (links to full-text)

Newspaper Articles:

Other Databases:

Journal Title Search –

- [Atoz List](INFO)

A complete list of journals, magazines and newspapers available to Plymouth State students, faculty and staff online and in the library.
- Searchable list of titles held or licensed by Lamson Library
- Includes direct links

↑ Journal Articles:
Click on database name to search.
Authenticating portal user for off-campus access to restricted databases. Please wait....

Click here if not redirected within a few seconds.
Database: BasicBIOSSIS

Limit your results:

- Linked Full Text
- Published Date
- Journal Name
- Publication Type
- Document Type
Welcome Nathaniel C. Bisson
You are currently logged in.

Welcome > Lamson Library > Your Account

Search LOLA (Library Catalog):

- Entire Collection

Select Search Type:

Advanced Search

Your library account:

2 requests (holds),
1 item currently checked out

Billing History
My Record

Bisson, Nathaniel

2 requests (holds).

<table>
<thead>
<tr>
<th>RENEW</th>
<th>TITLE</th>
<th>STATUS</th>
<th>CALL NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>U.S. 40; cross section of the Un</td>
<td>DUE 04-12-05</td>
<td>E169 .S85</td>
</tr>
</tbody>
</table>
**Billing History**

Most recent charges and refunds displayed at the bottom of the screen; does not reflect payments made to the bursar's office.

Please also check your bill in Banner Self Service.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Code</th>
<th>Item Description</th>
<th>Location</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-01-25</td>
<td>00:00</td>
<td>805</td>
<td>Picturing the bomb: photographs from the secret ...</td>
<td>LOST</td>
<td>$22.45</td>
</tr>
<tr>
<td>2005-02-01</td>
<td>16:02</td>
<td>805</td>
<td>INVOICE 2005-02-01 16:02:28</td>
<td>Replacement Costs</td>
<td>$22.45</td>
</tr>
<tr>
<td>2005-02-02</td>
<td>00:00</td>
<td>992</td>
<td>Picturing the bomb: photographs from the secret ...</td>
<td>LOST</td>
<td>-$22.45</td>
</tr>
<tr>
<td>2005-02-03</td>
<td>14:45</td>
<td>992</td>
<td>INVOICE 2005-02-03 14:45:26</td>
<td>Replacement Costs</td>
<td>-$22.45</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ILL Request for Books

Fields in red are required.

Patron Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Nathaniel Bisson</td>
</tr>
<tr>
<td>Status</td>
<td>Staff</td>
</tr>
<tr>
<td>Address</td>
<td>MSC # 40 - Library</td>
</tr>
<tr>
<td>Phone Number</td>
<td>535 2256</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:cbisson@plymouth.edu">cbisson@plymouth.edu</a></td>
</tr>
</tbody>
</table>

Item Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td></td>
</tr>
<tr>
<td>Author</td>
<td></td>
</tr>
<tr>
<td>Publisher</td>
<td></td>
</tr>
<tr>
<td>Place of Publication</td>
<td></td>
</tr>
<tr>
<td>Publication Date</td>
<td></td>
</tr>
<tr>
<td>Series</td>
<td></td>
</tr>
</tbody>
</table>
Certain features available only to staff, based on username.
Single Sign-On Details
Identity management is key...

Single sign-on only works because all servers are "on the same page" and can identify patrons in a common (or, at least, translatable) way
All these servers?

- Banner systems are the ID authority
- ID info pushed to each server

- Portal Server
- Web Server
- InnoPAC Server
The library tab

- CPIP is used to assert ID info to the webserver (CPIP = Campus Pipeline Integration Protocol)

- Used to connect to all sorts of ‘external’ systems, not just libraries

- Ask me about YaleCAS

A ‘standard’ Campus Pipeline CPIP connection
There is no ‘standardized’ or supported way to assert user information on the InnoPAC server as required for single sign-on.
The PSU single sign-on hack works by automating the submission of the authentication credentials.

We use III’s standard patron log in process, but submit the information in a hidden form.
Connecting to WAM

Remember:
Everything starts with the patron load
Connecting to WAM

- Client clicks on a WAM-enabled link which connects to the WS
- The WS looks up the patron’s name, barcode, and PIN (the InnoPAC authentication credentials)
- The WS returns a web page with a JavaScript that causes the client browser to submit authentication credentials to the InnoPAC
Connecting to WAM

- InnoPAC accepts authentication credentials
- InnoPAC sets browser cookie to identify the client
- After a delay, the client attempts to load the WAM URL for the protected resource
Connecting to WAM

- InnoPAC receives WAM request and identifying cookie from client.
- InnoPAC recognizes the valid cookie and fulfills the WAM request.
- Client has no idea what magic just went on.
Connecting to WAM
What’s this redirect script?

- All off-campus links go through a redirect script running on the web server.
- The redirect script makes decisions about what to do based on the destination URL, the client’s network location, status in the portal, and role memberships.
- Any URL from any page can be WAM enabled.
How does it connect?

URL input

- on campus or off?
  - On: Redirect browser immediately
  - No: Is URL WAM enabled?
    - Yes: Redirect browser immediately
    - No: Is client in Portal?
      - Yes: Access denied
      - No: Does client roles to use resource?
        - Yes: Reformat URL for WAM access
          - Present interstitial page with embedded Innopac authentication <iframe>
            - Refresh to WAM URL
    - No: Access denied

Check IP range
158.136.*.* = on campus
everything else = off campus
How does it connect?

1. **URL input**
   - **on campus or off?**
     - **On**
       - Redirect browser immediately
     - **Off**
       - **Is URL WAM enabled?**
         - **Yes**
           - Redirect browser immediately
         - **No**
           - Redirect browser immediately

2. **Is the destination URL in the WAM table?**
   - **Yes**
     - Does client roles to use resource?
       - **Yes**
         - Reformat URL for WAM access
       - **No**
         - Access denied
   - **No**
     - Access denied

3. Present interstitial page with embedded Innopac authentication <iframe>

4. Refresh to WAM URL
How does it connect?

URL input

- On campus or off?
  - On: Redirect browser immediately
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- Is URL WAM enabled?
  - Yes: Redirect browser immediately
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    - Yes: Reformat URL for WAM access
      - Present interstitial page with embedded Innopac authentication <iframe>
      - Refresh to WAM URL
    - No: Access denied
  - No: Access denied

Is the client in the portal?
How does it connect?

1. URL input
   - on campus or off?
   - Off
     - Is URL WAM enabled?
       - Yes
         - Is client in Portal?
           - Yes
             - does client roles to use resource?
               - Yes
                 - Reformat URL for WAM access
                   - Present interstitial page with embedded Innopac authentication <iframe>
                     - Refresh to WAM URL
               - No
                 - Access denied
         - No
           - Access denied
       - No
         - Redirect browser immediately
   - On
     - Redirect browser immediately

Are client roles listed among acceptable roles for the WAM resource?
How does it connect?

URL input

- on campus or off?
  - On: Redirect browser immediately
  - Off: Is URL WAM enabled?
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          - Present interstitial page with embedded Innopac authentication <iframe>
            - Refresh to WAM URL
        - No: Access denied
      - No: Access denied

"search.epnet.com" becomes 0-search.epnet.com.lola.plymouth.edu
How does it connect?

- URL input
- on campus or off?
  - Off
    - Is URL WAM enabled?
      - Yes
        - Redirect browser immediately
      - No
        - Redirect browser immediately
  - On
    - Is client in Portal?
      - Yes
        - Does client roles to use resource?
          - Yes
            - Reformat URL for WAM access
          - No
            - Access denied
      - No
        - Access denied

Send the authentication page to client with tricky JavaScript
How does it connect?

URL input

on campus or off?

On

Redirect browser immediately

Off

Is URL WAM enabled?

No

Redirect browser immediately

Yes

Is client in Portal?

No

Access denied

Yes

does client roles to use resource?

No

Access denied

Yes

Reformat URL for WAM access

Present interstitial page with embedded Innopac authentication <iframe>

Refresh to WAM URL

Wait a moment, then have client load WAM URL
Connecting to WAM
What’s this JavaScript?

- It’s part of a web page that contains a hidden form pre-loaded with authentication credentials.
- A one line JavaScript submits the form.
- The InnoPAC can’t tell the difference, and sets the appropriate cookie in the client browser.
Connecting to WAM
Tricking the InnoPAC

<form name='patform' method='post'
    action='http://lola.plymouth.edu/patroninfo'>
    <input name='name' type='hidden' value='Joe Pseudo'>
    <input name='code' type='hidden' value='12345678'>
    <input name='pin' type='hidden' value='5678'>
</form>

<script language='JavaScript'>
    location.href='javascript:document.patform.submit()'
</script>
Plugging into III

What about LDAP

...or the Patron API?

- III’s LDAP client software allows you to use authentication credentials stored on a remote server, perhaps one shared by a number of services

- ...But, it still requires that patrons enter a password when using protected resources

- Patron API allows a remote server to check the authenticity of a PIN against the patron database or get information about a patron

- ...But, it’s basically the reverse of what’s needed for single sign-on
Lessons Learned
Lessons learned

Stats

Library website usage
Page loads per month

Portal goes live
WAM fully integrated

[Graph showing library website usage from Feb-99 to Feb-05 with key events marked: Portal goes live in Feb-01 and WAM fully integrated in Oct-04]
Lessons learned
Technical considerations

- Standards for single sign-on and identity management are maturing slowly; vendor support is often limited.
- Going it our own way has created a small house of cards that keeps us on our toes.
Lessons learned

Do they like it?

To patrons, all our integration efforts are just meeting their expectations of ease of use.

They love it, and they don’t even know what a miracle it is.
What’s next?

Integration with XML Server to offer resources based on a student’s major or class schedule.

Deeper integration with WebCT to present all relevant library resources — reserves, bibliographies, research guides, recent acquisitions in the subject area — within the context of individual courses in WebCT.

Posting overdue notices and bills to “personal announcements” in the portal welcome page.
Questions?

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http://www.plymouth.edu/library/?portal