

Next Generation Portal Technologies

Bob Brown

Transentia Pty. Ltd.

bob@transentia.com.au

What is a Portal?

“The portal, one of many new concepts that have emerged from the Internet, allows a school or college to provide its students and staff with highly tailored windows into the Internet and to the applications to which the school subscribes. This focused and personalized screen greatly simplifies use of the computing network by enabling the user to navigate quickly to the information or application needed.”

The screenshot shows the Jetspeed web portal. At the top, it says "Welcome to Jetspeed" and "Server date: 20-May-00". Below this is a search bar with the text "Search the web for:" and a "Search" button. There are several sections of links and news, including "Apache Week", "Apache.org default", "win the news: ZDNet benchmarks Apache", and "win the news: E-Soft April 2000 survey". On the right side, there are sections for "Applications", "Checklist Resources", "Apache Release", and "News". At the bottom, it says "IBM WebSphere Portal Server" and "November 1, 2001 - 1:41 PM".

The screenshot shows a Yahoo! web portal. At the top, it says "Welcome to My Yahoo! - Yahoo! - Help - Sign In". Below this is a search bar with the text "Search" and a "Search" button. There are several sections of links and news, including "My Front Page", "Sign in to Yahoo!", "My Front Page Headlines", "Yahoo! Search", "Bookmarks", "My Bookmarks", "Portfolios", and "Need help signing in?". At the bottom, it says "Yahoo! Loan Center" and "Find the best mortgage".

The screenshot shows the IBM WebSphere Portal Server interface. At the top, it says "Welcome to WPS" and "IBM WebSphere Portal Server Version: 2.1 Build Level: 205 2001-10-25 19:08". Below this is a "Demo: Weather" section with a "Get Forecast" button. There is also a "Demo: Stocks (USD)" section with a table of stock prices. At the bottom, it says "Copyright IBM Corp. 2001 All Rights Reserved".

The screenshot shows the Avitek Staffing intranet. At the top, it says "AVITEK Staffing" and "A platform for Information Sharing". Below this is a search bar with the text "Search" and a "Search" button. There are several sections of links and news, including "Recruiting This Week", "Resource Availability", "6-Month Recruiting Trend", "Revenue", "Calendar", and "Job Postings for My Review". At the bottom, it says "Avitek Staffing" and "A platform for Information Sharing".

Quotable Quotes

“Enterprise portals offer one-stop shopping for knowledge workers...”

“A Web page that serves as a point of entry for surfers of the World Wide Web. ... Many portals also offer value-added services such as e-mail accounts, Web page hosting, or filtered information flow...”

“The clunky intranet has given way to sophisticated corporate portals, and analysts predict these portals may soon become the new metaphor for desktop computing in business.”

“At the most basic level, a portal is a web site targeted at a specific audience that provides:

- *Content aggregation and delivery of information relevant to the audience*
- *Collaboration and community services*
- *Services and applications access for the target audience, delivered in a highly personalized manner”*

“Anyone, Anytime, Anywhere Learning, on Any Device”

“As companies have grown over time, they’ve resorted to storing data in all sorts of formats...Portals strive to make all those data types accessible to the portal’s main servers no matter the manner in which the data is coded.”



Headaches?

■ Diverse

- sources of data
- types of data
- access mechanisms
- security mechanisms
- users

■ Desires

- reduce costs
- make best use of available, often outdated hardware
- personalisation
- customisation
- integration
- interworking

■ Needs

- ease of use
- re-task legacy data/systems
- impose workflows
- mobility rears its ugly head
 - Reaching out



Sweetness!

■ Portals!

- “back to the mainframe”
- VPN alternative/complement

■ Can give us

- single-sign-on
 - no more need for the memory of an elephant just to help recall lists of passwords!
- a unified user interface
 - easy of use
 - efficiency
- simplified/tailored workflow
 - vital for ‘unsophisticated’ users
 - *very few people can be sophisticated users across a range of systems*
- cost savings
 - eventually!
 - infrastructure is always hard to quantify/justify





Diabetes!

- May be easier to secure...
- Easier maintenance
 - software/hardware/users
- May not be so fragile
 - copes with version changes, etc. easier
- “Mix & match” composition of new functionality possible
- Easier licensing
 - “a grey area”?
- No need to be an ISP, just a web service provider



Bitterness!

- May need high-level *development* skills
 - OK for corporations; for schools...?
- Grunty hardware required
 - but probably less than for a Citrix solution
- Not necessarily easy to introduce new functionality
 - planned vs. ad-hoc growth/integration
- User interface may have to be lowest-common-denominator
 - HTML/forms don't always cut it...
- Connectivity
 - speed & availability
- Not everything can be integrated
 - Access/data idiosyncrasies
- \$\$\$

XML

- Fundamental to most everything else
 - standard textual format for codifying the structure of data
 - one of a whole load of interrelated standards

```
<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="style.xsl" ?>
<EMAILS>
  <EMAIL>
    <TO>sally@harem.com</TO>
    <FROM>bill@lovelorn.com</FROM>
    <SUBJECT>I need company tonight...</SUBJECT>
    <BODY>How about it, babe?</BODY>
  </EMAIL>
  <EMAIL>
    <TO>mary@lovenest.org</TO>
    <FROM>bill@lovelorn.com</FROM>
    <SUBJECT>I'm lonely...</SUBJECT>
    <BODY>Meet me tonight?</BODY>
  </EMAIL>
</EMAILS>
```



XML

```
<?xml version="1.0"?>
<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
  <xsl:template match="/">
    <html>
      <body>
        <xsl:for-each select="EMAILS/EMAIL/TO">
          <p><xsl:value-of /></p>
        </xsl:for-each>
      </body>
    </html>
  </xsl:template>
</xsl:stylesheet>
```

XSLT

XML...

- The next generation browser:
 - XHTML + XML + MathML + SVG
 - = substantially higher functionality

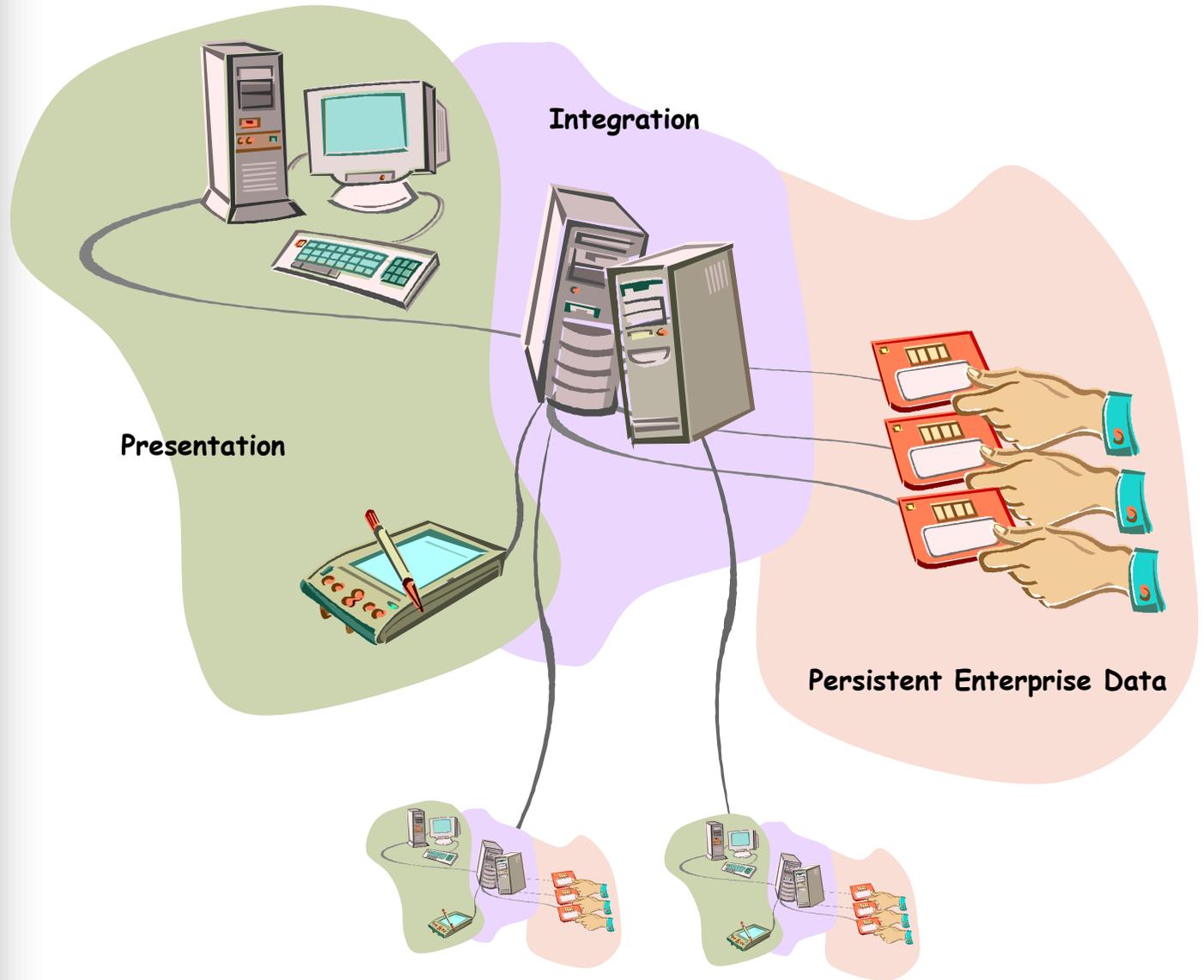


```
olympic.svg - Notepad
File Edit Format View Help
<?xml version="1.0" encoding="iso-8859-1"?>
<!DOCTYPE svg PUBLIC "-//W3C//DTD SVG 20000303//EN"
"http://www.w3.org/TR/2000/03/w3-SVG-20000303/DTD/svg-20000303-stylable.dtd">
<svg xmlns:space="preserve" width="5.5in" height="2in">
  <g id="blue" transform="translate(30, 20)" style="fill-opacity:0;">
    <circle style="fill:blue;stroke:blue;stroke-width:2;" cx="50" cy="50" r="15" />
    <text x="15" y="75" style="font-family:verdana; font-weight:bold; font-size:40; fill:blue;
writing-mode:tb; text-anchor:middle">Europe</text>
  </g>
  <g id="black" transform="translate(60, 20)" style="fill-opacity:0;">
    <circle style="fill:black;stroke:black;stroke-width:2;" cx="50" cy="50" r="15" />
    <text x="110" y="60" style="font-family:verdana; font-weight:bold; font-size:40; fill:black;
writing-mode:tb; text-anchor:middle">Africa</text>
  </g>
  <g id="red" transform="translate(90, 20)" style="fill-opacity:0;">
    <circle style="fill:red;stroke:red;stroke-width:2;" cx="50" cy="50" r="15" />
    <text x="80" y="75" style="font-family:verdana; font-weight:bold; font-size:40; fill:red;
writing-mode:tb; text-anchor:middle">America</text>
  </g>
  <g id="yellow" transform="translate(45, 38)" style="fill-opacity:0;">
    <circle style="fill:yellow;stroke:yellow;stroke-width:2;" cx="50" cy="50" r="15" />
    <text x="110" y="60" style="font-family:verdana; font-weight:bold; font-size:40; fill:yellow;
writing-mode:tb; text-anchor:middle">Asia</text>
  </g>
  <g id="green" transform="translate(15, 38)" style="fill-opacity:0;">
    <circle style="fill:green;stroke:green;stroke-width:2;" cx="50" cy="50" r="15" />
    <text x="110" y="60" style="font-family:verdana; font-weight:bold; font-size:40; fill:green;
writing-mode:tb; text-anchor:middle">Australia</text>
  </g>
</svg>
```



Two overlapping windows from a mathematical software application. The top window, "The Math Palette and the Types/Math Menu", shows a menu with options like "Expression within", "Expression with indices", and "Expression with mult". The bottom window, "Math Menu", shows a list of mathematical operations and functions, including "Addition", "Subtraction", "Multiplication", "Division", "Power", "Root", "Logarithm", "Exponential", "Trigonometric", and "Statistical".

Multi-tier Architecture





Spectrum of Solutions

- Many axes
 - cost, time, scalability, security interoperability, ease of use, etc.
- Many technologies
 - LAMP, J2EE, SOAP, etc.
 - XML
 - .NET to come
- Many vendors
 - Sun, Novell, Microsoft, etc.
 - Open Source solutions
- It's all *very confusing!*

Architecture Similarities

- All tools share the same basics
 - portlets/gadgets/filters/gizmos...
 - management tools
 - layouts/visuals
 - boxes, skins, layouts, styles, swim lanes, etc.
 - composition
 - customisation/personalisation
 - profiles



Stock Portfolio

Enter your symbols separated by commas:

Stock Portfolio

Symbol	Price	Change	Volume
SUNW	8.67	-0.26	94976000
IBM	105.90	+2.88	10767700
ORCL	13.67	-2.32	208718704
CSCO	16.48	+1.48	93038200

Typical Features

- Portal systems may provide:
 - syndicated content
 - HTML front ends to internal applications
 - e-Mail and/or calendar server/client
 - collaboration tools
 - integrated remote document access
 - integrated printing
 - access to X11 and Microsoft Windows applications
 - via X emulation/Citrix/(linux RDP)



LAMP

- Linux, Apache, MySQL, P*
 - Open Source languages/tools/etc.
 - Linux: Free/Open Source Operating System
 - *“free as in libre, not beer”*
 - Apache: Open Source Web Server
 - MySQL: Open Source relational database
 - P*: PERL, Python, PHP
 - three ‘trendy’ programming/scripting languages
 - low cost of entry (infrastructure), potentially offset by high development/maintenance costs





LAMP...

- A roll-your-own solution
 - for the DIY aficionado
 - may find many willing hands
 - even among the student body!
 - popular approach
 - care needed!
 - can keep costs down
- Relatively light hardware requirements
- Probably appropriate for light use/small number of users only
 - limiting issues are design, not technology
- Can do much the same with 'straight' Microsoft/Java technologies, etc.

LAMP...

Not a Portal
example *per-se*,
but you get the
flavour, I hope!

```
<html>
<head>Querying a database</head>
<body>
<?
$dbhost = "database.host.name";
$dbuser = "database.username";
$dbpw = "database.plaintext.password";
$dbName = "interesting_stuff";

mysql_connect($dbhost, $dbuser, $dbpw) or die("Unable to connect to host $dbhost");

mysql_select_db($dbName) or die("Unable to select database $dbName");

$result = mysql_query("SELECT inv.inventoryID, inv.dateAcquired,
    emp.firstName, emp.lastName, comp.computerDescription
    FROM inv, emp, comp
    WHERE ((inv.employeeID = emp.employeeID)
        and (inv.computerID = comp.computerID))
    ORDER BY emp.lastName, emp.firstName");

$number = mysql_numrows($result);

print "<p>There are $number records in the inventory:</p>";
for ($i=0; $i<$number; $i++) {
    $lastName = mysql_result($result, $i, "lastName");
    $firstName = mysql_result($result, $i, "firstName");
    $computerDescription = mysql_result($result, $i, "computerDescription");
    $dateAcquired = mysql_result($result, $i, "dateAcquired");
    print "$lastName, $firstName, $computerDescription, $dateAcquired<br />";
}

mysql_close();
?>
</body>
</html>
```



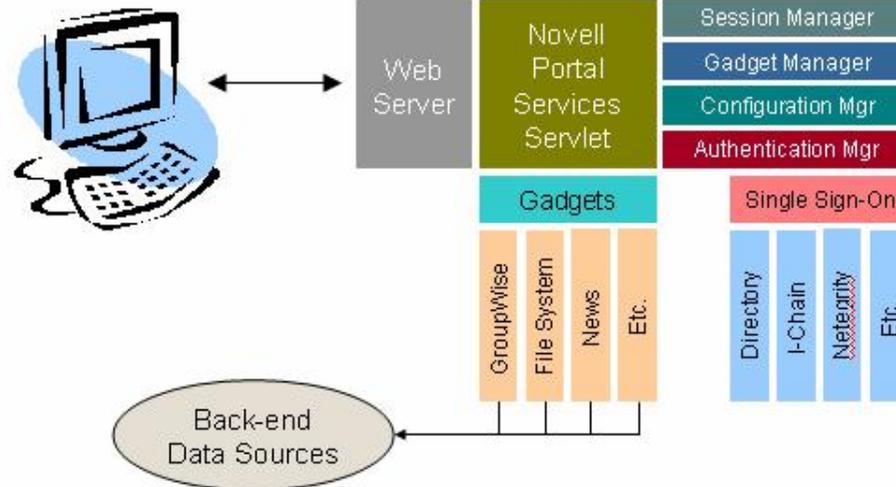
Novell Portal Services

- A 'no-brainer' for those sites that are heavily Novell-oriented



High Level Design

www.novell.com



1/25/2001

Copyright 2001, Novell Inc.

Novell.

slide taken from Novell's website

NPS...

- Servlets ('gadgets') that represent a small area on the screen showing the most important information from applications or web data
- Gadgets can link to anywhere on the web
- The administrator determines when, where, and how a gadget is viewed

■ Example gadgets

- Stock ticker
- News - headlines
- IMAP
- Weather
- File access
- Portal statistics
- Citrix
- Personalize
- GroupWise
- Exchange
- Html
- Shortcut
- Self-registration



NPS...

- Intranet oriented
- Gadgets
 - enhance Java Servlets
 - Live in a Servlet engine such as Tomcat
 - are configured using XML
 - generate XML data
 - use XSLT to render generated XML to HTML
 - can talk to practically any back-end source
 - are packaged and deployed into NPS using an Admin gadget
 - developer's SDK also includes a GadgetRunner tool



NPS...

```
import ...;
```

```
public class HelloWorld extends com.novell.nps.gadgetManager.BaseGadgetInstance
{
    private static final String HELLOWORLD_TAG = "HelloWorld";
    private static final String HELLODATA_TAG = "HELLODATA";
```

```
    public void getData(HttpServletRequest req, BufferedWriter out,
                        Document domTree)
```

```
    throws GadgetInstanceException
```

```
    {
        try
```

```
        {
            XmlUtil.writeStartTag(HELLOWORLD_TAG, out);
```

```
            ① XmlUtil.writeTag(HELLODATA_TAG, "Hello World!", out);
```

```
            XmlUtil.writeEndTag(HELLOWORLD_TAG, out);
```

```
        }
```

```
    catch(IOException io)
```

```
    {
        throw new GadgetInstanceException("I/O Error");
```

```
    }
```

```
    }
```

```
        <HelloWorld>
```

```
        ② <HELLODATA>Hello World!</HELLODATA>
```

```
        </HelloWorld>
```

```
<xsl:stylesheet version="1.0"
```

```
    xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
```

```
    ③ <xsl:template match="HelloWorld">
```

```
        <xsl:value-of select='HELLODATA' />
```

```
    </xsl:template>
```

```
</xsl:stylesheet>
```

```
    ④
```



J2EE

- Java 2, Enterprise Edition
- High-end 'enterprise' solution
 - initially intended for amazon.com-style ventures
 - becoming a more general tool
 - still a little difficult to find hands/brains...
 - infrastructure-oriented
 - scalable, secure, transactional, clusterable, available 24x7, etc.
 - not so pre-packaged
- Vendor independent
 - most big names involved: Sun, IBM, Oracle, BEA, HP, etc.
 - can be \$0 or \$x00,000, open source or mega-commercial
 - NOT Microsoft...
- Lays the foundation for personalisation/commerce systems
 - very high-end frameworks
- A fair bit of QLD adoption
 - especially by the government



J2EE...

- Incorporates many technologies
 - Servlets/Java Server Pages/Taglibs
 - Enterprise Java Beans
 - Java Naming and Directory Interface
 - Java Connector Architecture
 - Java Management eXtensions
 - XML
 - WebServices
- Emphasis on design
 - UML tools, Model-View-Controller architecture, etc.
- Emphasis on development lifecycle
 - coding/testing/deployment, etc.
- Heavy emphasis on tool support
 - Forte/Netbeans, Webgain, JBuilder, etc.

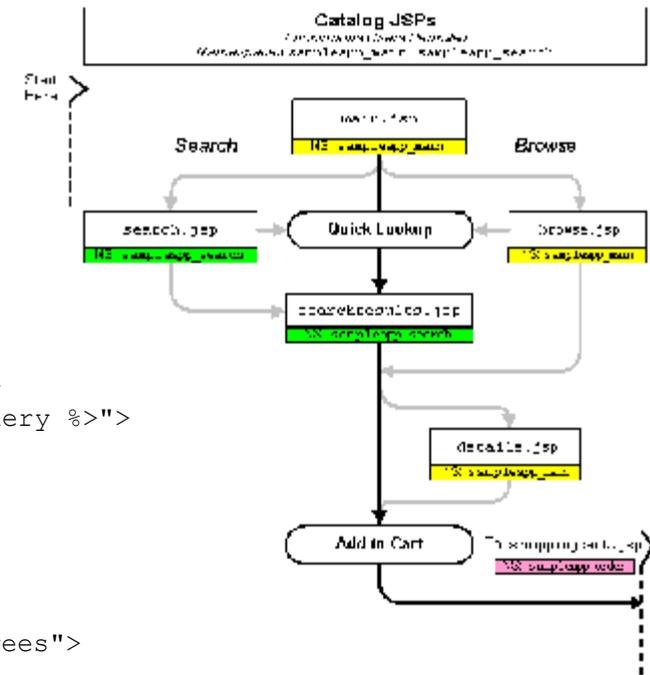


J2EE...

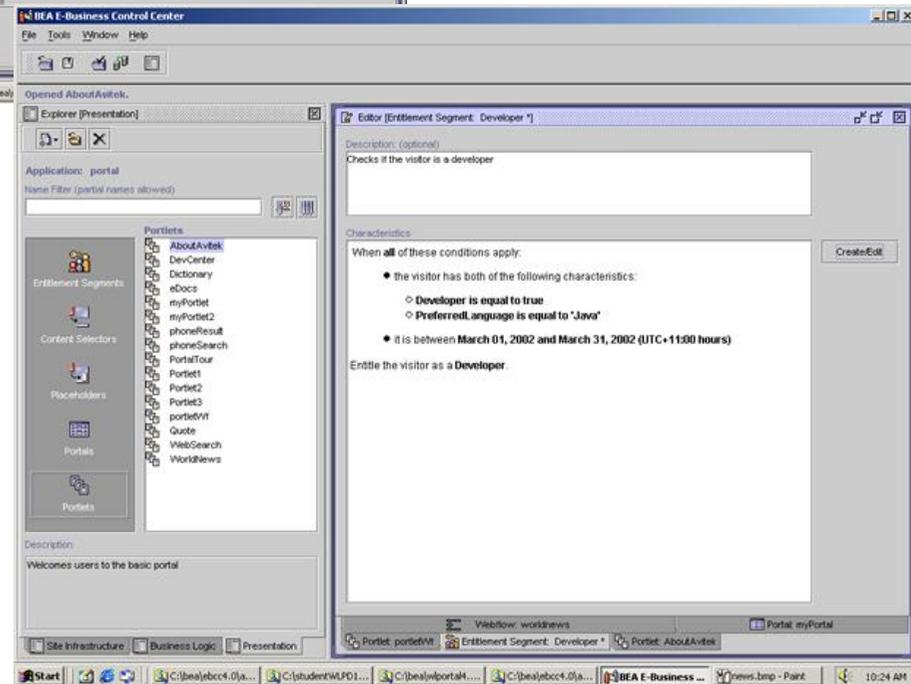
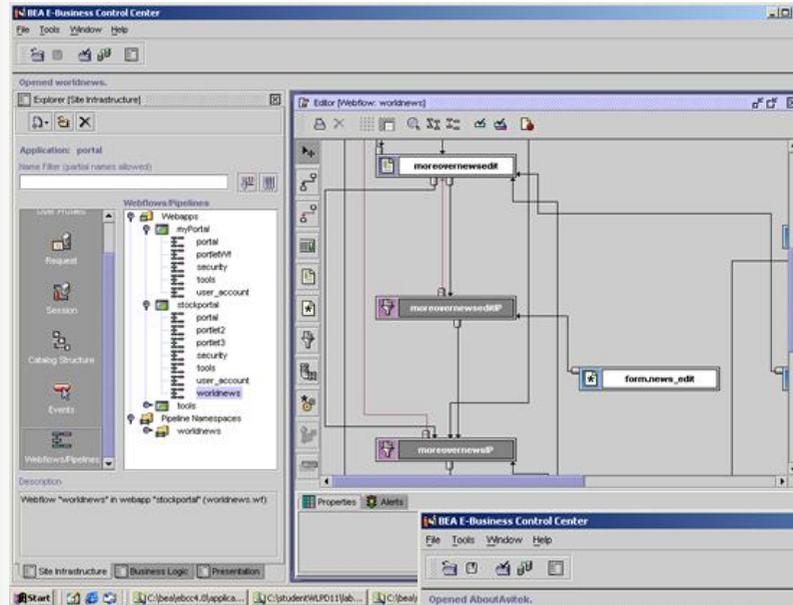
```

<%@ taglib uri="sql" prefix="sql" %>
<! String query = "SELECT * FROM emp"; %>
<html>
  <head>
    <title>Custom SQL JSP Tags</title>
  </head>
  <body>
    <h1>Employee Database:</h1>
    <sql:connection pool_name="demoPool">
      <sql:query id="employees" sql="<%= query %>">
        <p>Here are the results...</p>
        <table border="1">
          <tr bgcolor="#DDDDFF">
            <th>Employee Name</th>
            <th>Job Role</th>
          </tr>
          <sql:results from_query="employees">
            <tr>
              <td><%= employees.getString("ename") %></td>
              <td><%= employees.getString("job") %></td>
            </tr>
          </sql:results>
        </table>
      </sql:query>
    </sql:connection>
  </body>
</html>

```



J2EE...



*BEA's Weblogic
Portal Server 4.0
"E-Business
Control Center"*



J2EE...

- **Becoming commoditised**
 - good news!
 - marketplace is shaking out also-rans
 - but..the vendors are moving the wars onwards
 - the Next Operating System
- **Being Open-Sourced**
 - lots of high-quality hacking
 - JBoss/Tomcat/etc.
 - more good news!
 - cheaper/skills more widespread
- **Getting better all the time**
 - Introscope; Clickmarks

Oracle Portal Release 2

- No-brainer for Oracle sites
- Part of Oracle's 9iAS suite
 - Another J2EE-based product
 - BIG \$\$\$
- Well supported
 - 250+ portlets
 - 3000+ users quoted

"Oracle Portal comes to the rescue for site managers who are grappling with information overload and who need to distribute content-creation and publishing tasks while retaining administration and security in a centralized fashion.... We also found Oracle Portal easier to implement and use than many other portal solutions."

<http://www.infoworld.com/articles/tc/xml/00/08/28/000828tcportal.xml>

Oracle 9iAS Portal Catalog

The Oracle Portal Catalog contains information on the availability of the Oracle 9iAS Portal Edition. It also lists the products and services that are available. The Catalog is organized by category. The items listed are available in the Oracle 9iAS Portal Catalog. The items listed are available in the Oracle 9iAS Portal Catalog. The items listed are available in the Oracle 9iAS Portal Catalog.

- Portal Catalog
- Comment
- BI board
- divine Search and Content Integration
- Facility, a Division of Heuler's Company
- Forward, Inc.
- IntellectExchange
- JavaEonPage.com
- MapInfo
 - MapInfo's Portal
 - MapInfo's Portal
 - Routing Portal
- ScreenMedia, Inc.
- SearchVista
- TeleWeb (now including Synchrate)
- Hardware
- Independent Software Vendor
- Outsourcing
- System Integrator

Oracle...

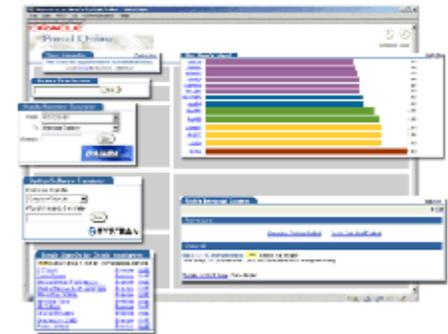
■ Targetted at bigger sites

- Those needing customisation
- Needs a fair amount of developer talent

■ Although Oracle will try and persuade you otherwise...lots of wizards exist...

■ Oracle supplies a feely-available standalone portal SDK and developer studio

```
<%@ page contentType="text/html; charset=UTF-8" %>
<%@ taglib prefix="portal"
      uri="/WEBINF/lib/wwjstag.jar"%>
<portal:usePortal pagegroup="MyPageGroup"/>
<portal:showPortlet name="StockQuote">
  <portal:parameter name="ticker" value="ORCL"/>
</portal:showPortlet>
```





JetSpeed

- The leading open source portal server
- Portlets are specialized Java Servlets that plug into and run in portals
- Designed to be aggregatable in the larger context of a portal page. They rely on the portal infrastructure to function.
- Uses Portal Structure Markup Language to define page layout/contents/decorations, etc.
 - JetSpeed provides a customiser/administrator tool to use during page assembly
- Uses XML to define services
- Queensland Institute of Engineers
 - <http://qld.ieaust.org.au/jetspeed/>

'Jetspeed is full of promise, but the bad news is that you have to be brave right now to start using it. Recalling the "release early and often" mantra of open source, it's still quite early if you haven't got the time to get involved in the project.'

JetSpeed...

```
package com.bluesunrise.portal.portlets;

import ...;

public class HelloUserPortlet extends AbstractPortlet
{
    public ConcreteElement getContent(RunData runData)
    {
        return (new StringElement("Hello World!"));
    }
}

<?xml version="1.0" encoding="UTF-8"?>
<registry>
  <portlet-entry name="HelloWorld" hidden="false"
    type="instance" application="false">
    <meta-info>
      <title>HelloWorld</title>
      <description>Portlet How To Example</description>
    </meta-info>
    <classname>com.bluesunrise.portal.portlets.HelloWorldPortlet</classname>
    <media-type ref="html"/>
  </portlet-entry>
</registry>
```

Add Title	Description
<input type="checkbox"/> AdminInfo	Description not available
<input checked="" type="checkbox"/> Apache News from Apache Week	The essential resource for anyone running an Apache server or anyone responsible for running Apache based services
<input type="checkbox"/> Apacheweek	Description not available
<input type="checkbox"/> HelloJSP	Simple JSP Portlet Example
<input checked="" type="checkbox"/> HelloVelocity	Simple Velocity Portlet Example
<input checked="" type="checkbox"/> HelloWorld	Portlet How To Example 1 - Hello World
<input checked="" type="checkbox"/> JSP1_2andJetspeedTagLib	JSP Portlet Example that displays data from the Jetspeed Tag Library and Java Servlet request class
<input type="checkbox"/> JavaSoft	JavaSoft
<input type="checkbox"/> Jetspeed	Description not available
<input checked="" type="checkbox"/> Jetspeed	Jetspeed is a multi-device portal system with simple syndication capabilities
<input type="checkbox"/> JetspeedContent	Description not available
<input type="checkbox"/> Mozilla	Description not available
<input checked="" type="checkbox"/> Mozilla latest headlines	Here you will find notices of important changes to the web site or new information important to the Mozilla developer community For pointers to the hottest article and threads in our newsgroups check out NewsBot
<input type="checkbox"/> My Bookmarks	Insert your personal links!
<input type="checkbox"/> Search	Search the Internet

Apply Cancel [Next >>](#)

JetSpeed...

Engineering Queensland - Microsoft Internet Explorer
Address <http://qld.ieaust.org.au/jetspeed/>

LOGIN | HOME | HELP | Register!
Membership No.:
Password: OK

ENGINEERING QUEENSLAND

The Institution of Engineers, Australia - Queensland Division

- Groups**
 - Young Engineers
 - Mechanical Branch
 - Heritage Panel
 - Water Panel
- Video Streaming**
 - Introduction
 - Installation & Usage
 - Schedule & Archive
- In The Community**
 - 2003 National Environmental Engineering Conference
 - Brisbane Engineering Heritage: A Walk/Drive Tour (0.4 MB PDF)
 - Engineering Excellence Awards 2002
 - Qld Engineering Week 2002
 - The BDP Environment Design Guide

[more...]
- Education Zone**
 - What is Engineering?
 - What do Engineers do?
 - Types of Engineering
 - Studying Engineering
- IEAust Links**
 - National Office
 - Canberra
 - Newcastle
 - Northern
 - South Australia
 - Sydney
 - Tasmania

Features

Engineering Golf Day - Thursday 19 September 2002

Its that time of year again to dust off the clubs and practice your swing in readiness for the Institution of Engineers, Queensland Golf Day. Members, associated professionals, clients and guests are invited participate in this 4 person Ambrose event to compete for over \$3,500 in prizes. Your \$55 member or \$66 non member registration fee covers your entry into the event, a light lunch, buffet dinner, and drinks before, during, and after the game. Get your own team together or just register individually and we will place you in a team. Register now to secure your place.



[full story]

Thredbo Landslide and Canberra Hospital Implosion: 5 Years on

July marks the five year anniversary of the terrifying Thredbo Village collapse and Canberra Hospital implosion. At Thredbo, 18 people lost their lives when tonnes of rubble slid down the side of a hill, crushing people and buildings. As part of Queensland Engineering Week and the 2002 Breakfast Series, the Queensland Division will be holding a breakfast on Monday 12 August at which Mr Bernard Collaery, a principal of Collaery & Colquhoun Lawyers will discuss the issues involved with these tragedies. He will also relay the active role that he has had in the rebuilding of East Timor. If you only get along to one IEAust presentation this year this is it!



[full story]

[archive]

Members Only

Members!

To access the members-only area, simply [register here](#). This area provides:

- Event Info & Registration
- Engineering News
- Career Advice
- Engineering Tools
- Member Polls
- Customised Homepage
- Business & Investment
- Key Economic Data

Not a member? Find out more about the [benefits of membership](#), [membership categories](#) or [join now!](#)

Event Info & Registration

12/08/02	Public Presentation Competition	
12/08/02	Disasters: Engineering Advice Before or After?	
13/08/02	Experiences with the UK Electricity Market - Winners and Losers	
13/08/02	Major Engineering Projects in Queensland	
15/08/02	Retaining Walls	
17/08/02	Innovation, Business and Investment Forum	
17/08/02	Abbotsleigh Citrus Bus Tour	
17/08/02	YEA-Q Annual General Meeting	
19/08/02	An Introduction to Lean Thinking	
23/08/02	Alliance Contracting Short Course	

[View All Events]

Internet



WebServices

■ The “Next Big Thing”

- XML messaging to permit *ad-hoc* interactions
 - A2A: application-to-application
- Being rolled into *many* products

■ Requires

- Agnosticism
 - Java/.NET; HTTP vs. messaging
 - Open Standards
- Self description/self configuration
- Ability to pass through firewalls

WebServices...

■ Technologies

- SOAP; WSDL; UDDI
 - Messaging; description; directory
- Plus a plethora of others
 - E.g. WS Orchestration Language

```
POST /BookServer HTTP/1.1
Host: www.gimmebooks.com
Content-Type: text/xml-SOAP
Content-Length: nnnn
SOAPAction: "Some-Namespace-URI#PlaceOrder"
```

```
<SOAP:Envelope xmlns:SOAP="urn:schemas-xmlsoap-org:soap.v1">
  <SOAP:Body>
    <m:PlaceOrder xmlns:m="Some-Namespace-URI">
      <Title>Gardening for Beginners</Title>
      <Author>G. Fingarz</Author>
    </m:PlaceOrder>
  </SOAP:Body>
</SOAP:Envelope>
```



```
HTTP/1.1 200 OK
Connection: close
Content-Type: text/xml
Content-Length: nnnn
```

```
<SOAP:Envelope xmlns:SOAP="urn:schemas-xmlsoap-org:soap.v1">
  <SOAP:Body>
    <m:PlaceOrderResponse xmlns:m="Some-Namespace-URI">
      <return>1</return>
      <DaysToDelivery>7</DaysToDelivery>
    </m:PlaceOrderResponse>
  </SOAP:Body>
</SOAP:Envelope>
```



WebServices...

- What does this mean for portals?
 - Easier integration
 - More to integrate
 - Higher-level functionality/interactivity/sophisticated applications
 - Not just text, pretty pictures and “stock quotes”
 - A greater integration budget?

“...I think that this is what the grown up web was meant to be, combining the best that HTTP has to offer and great server operating systems, and the best that the desktop has to offer in tools and user interfaces.”

Dave Winer, CEO, UserLand



Microsoft SharePoint Portal Server

- Presents a collection of *digital dashboards*
- A digital dashboard aggregates disparate pieces of information and services and presents them by using *web parts*
- Web parts are reusable Web components that contain any kind of Web-based information
- Heavily XML oriented
 - also ADO/ASP...
- Visual Studio allows development of dashboards and other site infrastructure
- Office XP Developer is the primary tool for building web parts
 - lots of pre-canned functionality available
 - threaded discussions, etc.
 - allows for easy publishing
 - A no-brainer for the Microsoft world?



SPS...

■ Some Features

● Search Engine

- Data Access and Indexing
- Subscriptions
- Categories
- Low-Latency Indexing
- Search Extensibility

● Document Management

- Office and Windows Integration
- Check-in and Check-out
- Document Versioning
- Document Profiling
- Document Collaboration
- Security
- Lifecycle Management

● Portal Features

- Digital Dashboard-based Portal
- Shareable Personal Dashboards
- Web Storage System
- Standard Tools
- Standard Interfaces

http://www.sandbox.ucla.edu/sharepoint_portal.htm



JSR 168: Portlet Specification

- Java Community Process Specification Requests
- Portlets are web components specifically designed to be aggregated in the context of a composite page
 - many Portlets are invoked in the single request of a Portal page, each produces a fragment of markup that is combined with the markup of other Portlets, all within the Portal page
- First version has the following design goals:
 - Client agnostic with support for multiple types of clients (multi-device)
 - Simple Portlet API
 - Support for Localization and Internationalization
 - Hot deployment and re-deployment of Portal applications
 - Declarative security
 - support remote execution of Portlets





EDUCAUSE

■ Web Portal Constituent Group

- <http://www.educause.edu/memdir/cg/portals.html>
 - Devoted to examining solution-independent Web portal technology in higher education institutions
 - Mailing lists, archives, etc.
 - US-oriented
 - Still useful...
- ## ■ Main site is also a useful resource

Closing Thoughts

- A lot is happening at the moment
 - a wide spectrum of choices
 - choice is good (?!)
 - need to be careful that what looks good *now* will look good *later*
- Portals offer promise
 - significant planning and development needed to use effectively
 - many educational institutions *are* implementing portals
- Build infrastructure, not solutions
- you're not in Kansas anymore
 - it's a development not an integration task



Thoughts: EduSPs

- A popular idea (with vendors)
 - offload a school's facilities and functions to third party vendors

"Beware of portals you can't leave.

GIVEN HALF A chance these days, it seems that every major software vendor is willing to give any prospective customer a portal for free. The first thing the vendor thinks is "What can I appear to be giving away in order to get the account?" The first and most obvious answer they come up with is the portal.

The trouble with this apparent generosity is that once you accept an invitation to enter a portal you may never leave....once you standardize on their portal, you are practically locked into their platform for eternity.

Portals in general are a good idea, but the original purpose of this class of software is being perverted as the major enterprise software vendors try to make the portal the next great user interface war.

...

With that in mind, the best thing you can do the next time someone offers to bundle in a portal is just say no. They are trying to get you addicted to a user interface that will make your IT organization subservient to their middleware.

...

So by all means, go through that portal. Just make sure the key to the door stays firmly tucked away in your pocket."

— Michael Vizard , Infoworld



Resources

- <http://www.campusportals.org>
- <http://www.novell.com/products/portal>
- <http://java.sun.com/j2ee>
- <http://java.apache.org/jetspeed>
- <http://jcp.org/jsr/detail/168.jsp>
- <http://www.infoworld.com/articles/op/xml/02/02/25/020225opnoise.xml>
- http://www.computerworld.com/cwi/story/0,1199,NAV47_STO45471,00.html
- <http://www-106.ibm.com/developerworks/ibm/library/i-portal/>
- <http://www.microsoft.com/sharepoint/portalserver.asp>
- <http://portalcenter.oracle.com/>
- http://www.peoplesoft.com/corp/en/products/edu_gov/suite_campus_portal.asp
- <http://web.mit.edu/oki/>

