Enterprise Information Portals

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Special Thanks

- Thanks to William Shrubsole, AWMS RPC for his help and support for the project.
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RPC (Prairies)

- The Regional Psychiatric Centre (Prairies) is a 204 bed mental health facility located in Saskatoon, SK.

- RPC is part of the Correctional Service of Canada, affiliated with the University of Saskatchewan and partnered with the Province of Saskatchewan.

- Unique in its functions, the RPC is an accredited hospital and a federal correctional institution. The facility also has a large research unit in collaboration with the University.

Enterprise Information Portals

- Most definitions of a portal have certain similar characteristics or themes running through them.

- Instead of trying to redefine an Enterprise Information Portal we will examine some of the common characteristics of portals and implementation strategies for these concepts.

- A good way to think of a portal is to think of it as a filtering device for information. A portal provides information **for** not simply information **about**.

Portal Characteristics

- Presenting information to the user that the user requires in a standard format with a standard interface.

- Secure delivery of information while making the complexities of security, as well as access to disparate information sources, transparent to the user.

- Utilization of both "push" and "pull" technologies for transmitting information.

- Support for user interactivity.

The RPC Portal

- User Management and Security
- Content Customization ("Push" and "Pull")
- Content Management Techniques
- Searching Techniques
- Customizable data delivery using XML and XML Data Islands

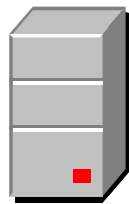# User Management & Security

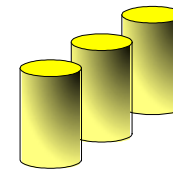- The following displays an overview of the current CSC infrastructure:
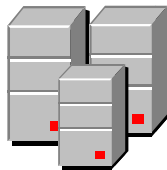
Active Directory
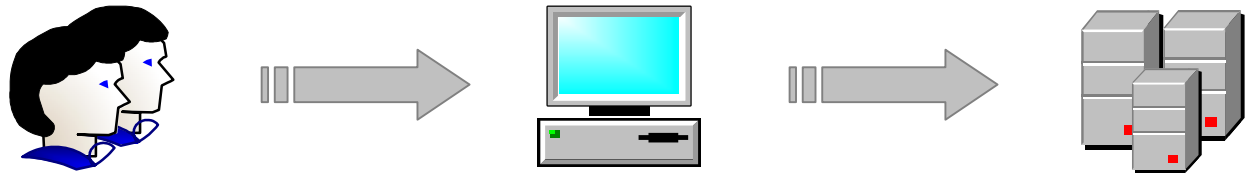
Internet Explorer 6 SP1
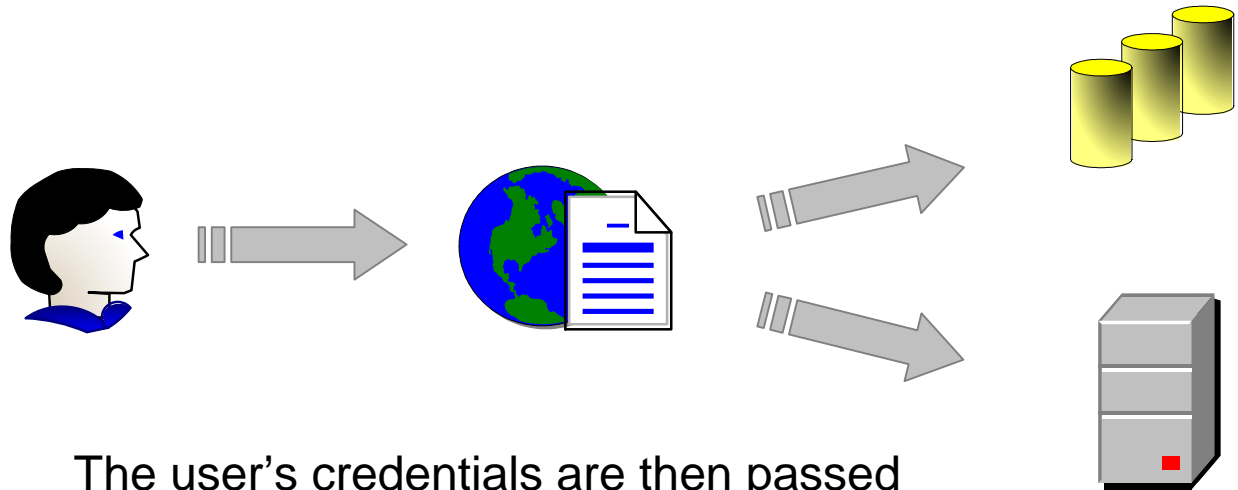
Windows 2000 Web Server

SQL Server 2000

User Management and Security

- Single sign-on and authentication.
- Automatically identifying users and their roles.
- Secure database access.
- Connecting to other systems.

Single Sign-On and Authentication

To logon to a computer users must be authenticated by the Active Directory.
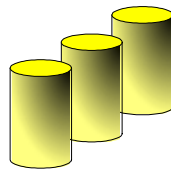

The user's credentials are then passed transparently to the portal and through to other back office systems.
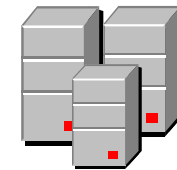
User Identification

When a user enters the portal the only information known about them is their username
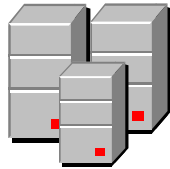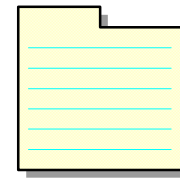
Portal database   Active Directory

- A linked data source was created between the SQL Server and the Active Directory.
- This link facilitates retrieving information about the user the first time they access the portal, and also keeps the user's active directory information up to date.

# User Identification

Active Directory

User Information

- The user information in the Active Directory is maintained according to corporate standards.

- The information retrieved from the Active Directory is analyzed and then used to deliver the appropriate content to the user's customized home page.
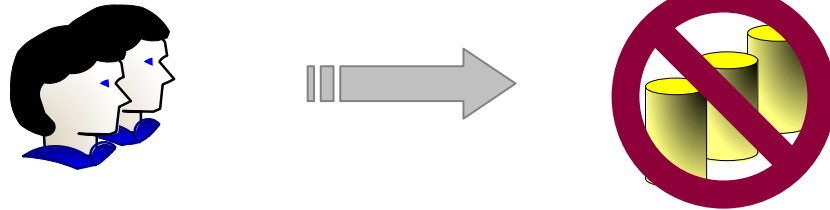
Secure Database Access

- The web server communicates with the portal database through a set of stored procedures.

- This strategy allows for a separation between database access and the user interface.

- Users are granted access to certain stored procedures, but are not granted any access to the underlying data in the database except through the stored procedures.
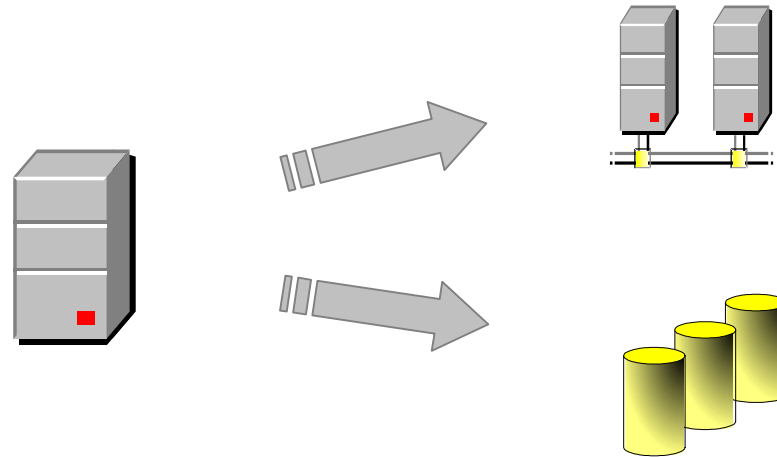
Secure Database Access
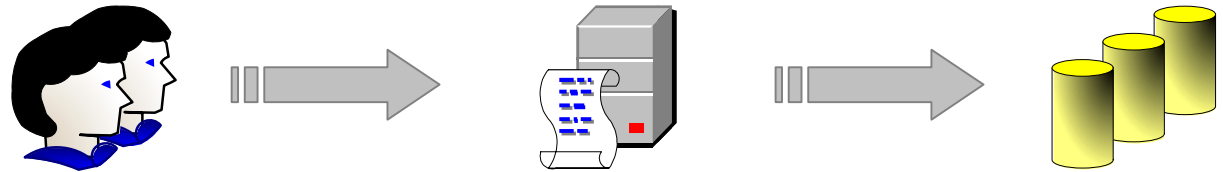
Users can only access data through stored procedures. The stored procedure enforces which data is returned to the user.

Users cannot directly access the database or the Underlying tables directly.

Connecting to other systems

The web server can either create a secure connection to obtain resources from another system;

Or, the user's credentials can be passed through to the remote database or system if the system supports this type of authentication.

Content Customization

- Individual customizations are stored as a Profile in an SQL database based on the user's Windows logon name.
- Individuals manage their Profile settings using the "Edit Your Profile" web page.
- The Profile stores the following information about a user:
  - Content modules
  - Content layout
  - Colour scheme
  - Other preferences

Content Modules

- Web site content is organized into independent sections termed "Content Modules".

- This independence enables any combination of content to be displayed, based upon individual users or groups of users (role-based).

- Content may be customized by the Web Administrator or individuals using the "Edit Your Profile" interface.

Content Layout

- The independence of the "Content Modules" enables the ordering of the modules to be customized.

- Users manage the layout using a graphical view of their custom content. This process is very easy and user-friendly.

Colour Schemes

- The web site offers 10 different pre-configured colour schemes.

- Colour schemes are independent of the actual content.

- All style elements have been separated from the content and stored in style sheets.

- This enables all content to be displayed in various colour schemes without any changes to the content or individual HTML web pages.

- Demonstration: changing a user profile's content, layout and colour.

Push Custom Content

- Web Administrator assigns content to be automatically delivered to a user or group of users.

- Assigned content can be marked as mandatory or optional.

- Mandatory content cannot be removed from the user's profile.

- Optional content may be removed from the user's profile once it has been initially delivered.
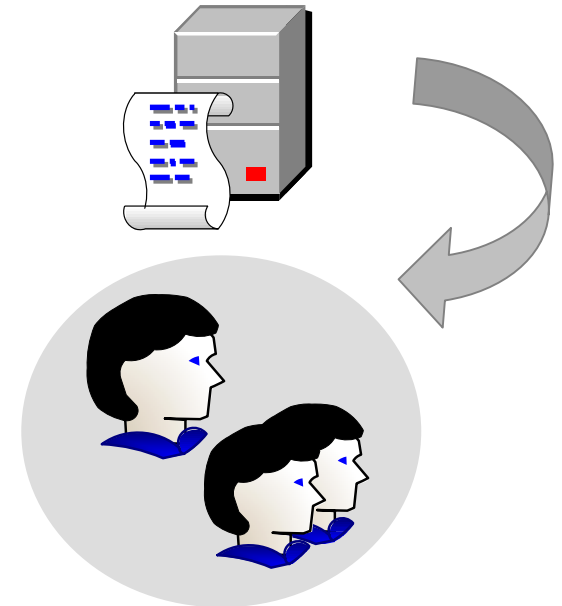
Pull Custom Content

- Individual users manually select the desired content from a list of available modules.

- Selected modules appear on the user's home page immediately after selection.

- Content that was assigned by a Web Administrator may be removed at this web page.

- Some modules can be further customized, such as the custom links listing.

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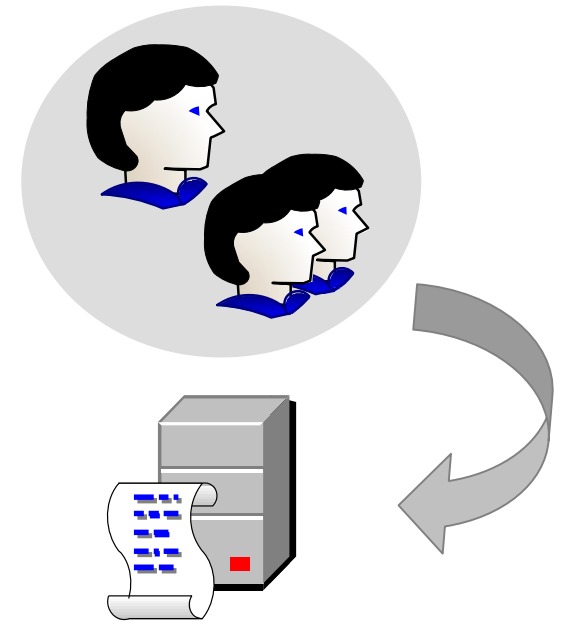
Content Management Techniques

- Document lists are managed using an Upload functionality.

- Authorized users can upload documents to the web page, which are in turn automatically added to the page as a hyperlink.

- Administrators are notified of uploaded documents as they occur. This enables usage monitoring.

- Demonstration: upload document to meeting minutes list.
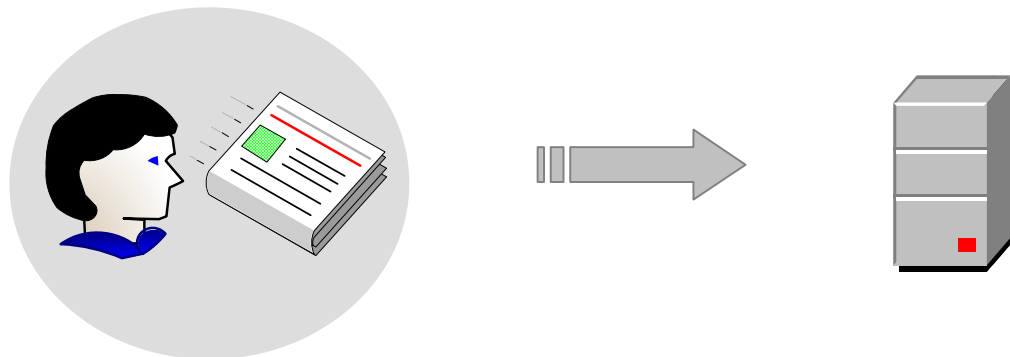
Content Management Techniques

- Based on metadata, authors can be notified of content flagged for review or expiration.
- Additionally, expired content can automatically be removed from the web site.
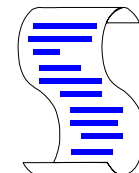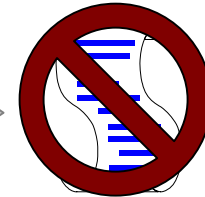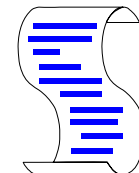
Searching Techniques

- Metadata is stored with each file on the web server. This data is used when searching files.
- The Advanced Search enables custom searches such as:
  - Documents flagged for review
  - Expired documents or HTML pages
  - Documents authored by specific individuals
- Demonstration: advanced search sorted by review date.

Customizable Data Delivery using XML

- One of the characteristics of portals is the provision for user interactivity.

- XML and XSLT provide a framework for client-side user interactivity thus minimizing the load on the server.

- XML can also be used to save the state of a particular page and then recall that view at a later time.

Customizable Data Delivery using XML

- Demonstration: RPC Form List - Data is supplied as XML and is embedded in the web page as an XML data island. Using XSLT, the data can then be manipulated client-side to suit the user's needs.

- Demonstration: XML Report - Using a generic XML data island. Report is manipulated using XSLT.

- Demonstration: Web Pivot Control - The control is driven from an XML data island and maintains state with XML data.

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