Application for the 2008 Larry L. Sautter Award for Innovation in Information Technology

Project Title:

Career Compass: Berkeley Job Builder

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Project Summary:

The University of California, Berkeley has been engaged in a project for the last six years that is changing the way we manage our staff workforce. Referred to as “Career Compass,” the project links three major activities: job standards, performance management, and career development. Together these three activities provide the foundation for effective campuswide talent management and succession planning, affecting over 10,000 staff employees. As part of the job standards initiative, Berkeley built the “Berkeley Job Builder.” This simple tool provides a gateway for employees to understand how their current job responsibilities fit into the broader labor market. It is saving thousands of hours of manager and supervisor time by facilitating creation of job descriptions from job standards developed by teams of HR and subject matter experts.

Project Description:

The Berkeley Job Builder (http://secure.vcbf.berkeley.edu/CareerCompass/jobtree.aspx) is a web-based tool that makes the newly-written, market-based job structure available to anyone on campus.

When first launching the Job Builder, the user sees a list of twenty job fields. A job field is a group of jobs that involve work in the same general occupation. For example, Information Technology is a job field.

Clicking on a job field will expand the job tree to show job families. A job family is a more specific occupational area within a job field. For example, in the Job Builder, there are 16 job families in the Information Technology job field:

- Applications Programming
- AV IT
- AV IT Engineering
- Business Systems Analysis
- Business/Technical Support
- Comm & Network Technology
- Data Management
- Database Administration
- Information Systems
- IT Architecture
- IT Security
- Production Control
- QA/Release Management
- Systems/Infrastructure Admin
- Technical Project Management
- User Experience Design

To help managers and supervisors determine the appropriate job family for their employees, the Job Builder provides job family descriptions when a user rolls the mouse over each job family. (See Job Builder Example 1)
Within each family are categories of jobs, which describe the nature of work performed, such as Operational & Technical, Professional, or Supervisory & Managerial.

Lastly, within each category there are different levels of jobs. Some families have all of these levels, some families only have a few. The job structure only includes levels that represent actual jobs currently performed here on campus.

For example, an IT Manager may want to look up the job standard for an employee who works in Applications Programming. By navigating the job tree and selecting Application Programmer 3, the manager can access the definition of scope, job responsibilities, and knowledge and skill requirements for that job. (See Job Builder Example 2 and 3)
After reviewing the job standard on screen, the manager can print the job standard for reading off-line, or create a job description, which can be customized for the individual employee. (See Job Builder Example 4)
The auto-generated job description template is a Microsoft Word document, which can be customized to include the employee’s name, additional responsibilities, preferred knowledge and skills, percent of time spent performing various job duties, problem solving and other portions of the document as appropriate. The "track changes" functionality in the Word document is pre-activated, so the Compensation unit in Human Resources can keep track of how an individual’s submitted job description varies from the job standard. (See Job Builder Example 5)

In addition to the public role, the Job Builder also has a Compensation Analyst role and a Global Administration role, which permit easy creation and editing of job standards by authenticated users in Human Resources.

At this point, over 600 job standards have been written for the non-represented Berkeley jobs by a team of compensation and classification specialists in consultation with hundreds of campus managers. In 2009, HR Compensation will add job standards to the Job Builder for the represented population.
Technology Utilized in the Project:

The Berkeley Job Builder is a web application (HTML, CSS, Javascript):
- Language: Visual Basic .NET
- Web Server: Microsoft IIS
- Database Server: Microsoft SQL Server 2005
- Server Operating System: Windows XP

In order to create Job Builder, COIS programmers leveraged three powerful in-house code libraries:

1. The Winnie library provides the architecture for managing user authentication and database access across development, quality assurance and production application environments. Additionally Winnie defines a consistent user interface for ASP.Net web pages.

2. The Authorize library provides a web interface for creating hierarchical roles, associating those roles with specific actions, and associating users with the roles. The functional owners of Job Builder can login to Authorize in order to manage which employees have the ability to create, edit, delete, publish, and unpublish job standards. Authorize is a generic roles management application, which is used in multiple COIS applications.

3. The CareerCompassControls library provides dynamic transformation of user interface controls depending on the task being performed by a user. (By controls we mean things like text boxes, select lists, and radio buttons.) When a Job Builder administrator wants to review a job standard, the administrator accesses it in "view mode." (This is a non-interactive, "read-only" mode.) In order to make a change to a standard, the administrator must enter into "edit mode." When the administrator switches modes, non-interactive controls (such as .NET labels, which are read-only text boxes) are transformed into interactive controls such as text boxes or select lists. The CareerCompassControls library allows a programmer to specify whether a certain label should be transformed into a text box (allowing entry of arbitrary text) or into a select list (allowing entry of only specific, predefined text). The advantage of this is that the same VB.NET code for a page is executed regardless of the "mode" (view or edit) that the administrator is using. In order to define the mode, the application simply passes a session variable to the page. Abstracting the transformation of user interface controls allows the creation of one page to serve multiple "use modes" instead of multiple pages. Furthermore the CareerCompassControls library can be used in other applications with similar requirements.

Timeframe of Implementation:

<table>
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<tr>
<th>Timeframe</th>
<th>Activity</th>
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</thead>
<tbody>
<tr>
<td>February 2007</td>
<td>Requirements gathering</td>
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<tr>
<td>February – March 2007</td>
<td>Conceptual design</td>
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<tr>
<td>February – March 2007</td>
<td>Database design</td>
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<td>April – July 2007</td>
<td>Development</td>
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<td>August – September 2007</td>
<td>Functional review and testing</td>
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<td>October 2007</td>
<td>Accessibility review</td>
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<tr>
<td>October – December 2007</td>
<td>User interface design, data conversion, final QA testing</td>
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<td>December 2007</td>
<td>Application release 1.0</td>
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<td>January – February 2008</td>
<td>User acceptance period</td>
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<tr>
<td>February – April 2008</td>
<td>Incorporate enhancements based on feedback</td>
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Customer Satisfaction Data:

Our challenge was to make the new job structure information available to staff and supervisors in a user-friendly, accessible manner. For the first time in the history of the University of California, employees now have “24/7” online access to information that defines their jobs in terms of the marketplace for their profession.

Evidence of customer satisfaction includes:

1. **UC Berkeley:** The Berkeley Job Builder is the element of Career Compass that has elicited the most positive response across the board. Employees appreciate having easy access to information that takes the mystery out of classification decisions. Managers and supervisors value the time it is saving them to write position descriptions for their subordinates. We estimate that this workload has been reduced by about 75%. Department HR Managers appreciate the time savings and the ability to ensure consistency among job descriptions within their units. Union leadership is also reacting positively to the availability of information that more clearly defines job duties. And HR Compensation staff has streamlined its processes for creating/editing job standards and evaluating job descriptions submitted for classification.

   The Berkeley Job Builder was soft-launched on December 20, 2007. After the winter holidays, an announcement was sent from the Vice Chancellor of Administration to all non-represented staff. Immediately thereafter, the Job Builder received 1400 pageviews in the first 24 hours. Since then, it has continued to be the most popular destination on the Career Compass website (http://careercompass.berkeley.edu).

   The Berkeley Job Builder team also incorporated user testing from the Web Access group, a campus group dedicated to improving accessibility for users with disabilities. This commitment to accessibility was greatly appreciated and held as an example for other campus web applications.

2. **Other UCs:** Other campuses within the University of California and the systemwide office are exploring whether to use the Berkeley Job Builder and the new job standards. Initial discussions have been held with the Office of the President, UC Merced, UCSF, UC Davis, and UC Riverside. The Berkeley Job Builder has also been discussed at meetings of the UC Compensation Managers and the UC Employment Managers, and there is interest in expanding the Job Builder to be a systemwide tool that can be customized by each campus.

3. **External:** Regular visitors to the Berkeley Job Builder include not only users throughout California, but also visitors from across the U.S., Canada, Philippines, India, and the U.K.