

Kuali Design Critique

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Overview

Kuali is a community source project to provide a suite of tools for financial systems at educational institutions. Tools will be developed at a number of universities across the country and will be integrated into a unified application. In order to provide a consistent look and feel to modules developed by different teams, standards, a style guide, and mock-up screen designs are being created. As design decision are made, the team would like to get user feedback in order to incorporate changes to the design at a time in the development cycle when changes are easier and less costly to make. Some of the screens involved in the various finance related tasks are complex and contain a great deal of information that the user needs to see. The goal is to make the process as clear, efficient, and easy to use as possible. In order to obtain feedback on the interface, a design critique was held on April 7, 2005, to present the screens to the functional team representing the founding partners. Overall, participants were pleased with the screens and the overall look, as well as the functionality the system will provide.

The results of the design critiques are presented on the following pages in table format. The table contains three columns including Observations/Comments, Recommendations, and Rationale as described below.

Observations/Comments – This column includes statements made by participants at the design critique as well as observations by the UXG team.

Recommendations – this column includes recommendations to consider as development continues.

Rationale – This column includes the reasoning or guidelines that the recommendation is based on.

The table is divided into sections associated with the various screens and panels shown in the design critique. The sections include: Internal Billing – Doc Info, Account Info Pop-Up Window, Item Details, Pending Ledger, Routing, Maintenance Screen, and Other. The ‘Other’ section contains comments affecting the system as a whole rather than a particular screen shown during the critique.

Table of Contents

- OVERVIEW 1**
- TABLE OF CONTENTS..... 3**
- DESIGN CRITIQUE RESULTS 4**
 - INTERNAL BILLING – DOC INFO 4
 - ACCOUNT INFO POP-UP WINDOW..... 7
 - ITEM DETAILS 8
 - PENDING LEDGER..... 8
 - ROUTING 9
 - MAINTENANCE SCREEN..... 10
 - OTHER..... 11
- APPENDICES 14**
 - APPENDIX A – TABLE LAYOUT WITH ITEM NAMES 14
 - APPENDIX B – DOCUMENT INFO LAYOUT 15
 - APPENDIX C – HIGHLIGHTING A MODIFIED ROW 16
 - APPENDIX D – ARCHIVED MAINTENANCE SCREEN DATA 17
 - APPENDIX E – INDICATING NOTES 18

Design Critique Results

Internal Billing – Doc Info		
Participants would like to see the name of the items listed in the display table as well as in the ‘add’ row. This would help them to complete their work in a more efficient manner.	1. Include the name of each item in the table in addition to displaying this information in the ‘add’ row as users’ enter data. See Appendix A	Provide information that will allow user to accomplish their goals more quickly.
Participants would like the option of not viewing the names of all items to reduce the screen length.	2. If possible, provide the item names as a feature that can be toggled on and off at will by the user. 3.	Whenever possible, provide users with the flexibility to view data in the manner most convenient for them.
Participants appreciated that they could click on the account number (sub-acct, object code, etc.) and view the details of that item in a pop-up window.	4. Retain this feature.	Provide users with easy access to necessary information.
It was suggested that the chart information be automatically entered by the system after the user enters the account number.	5. If the account numbers have a one to one relationship with chart, consider automatically completing this information for the user – if this relationship will vary from institution to institution, allow individual institutions to implement this feature as desired.	Reduce data entry whenever possible by pre-populating fields with known values.
Participants were curious as to when data validation would occur. Some thought validating data after each row is entered would be best; others thought a single validation when all data had been entered would be best. One participant suggested validating each item when the user tabs out of the associated field.	6. Retain the ‘add’ button and validate the new data when the user clicks this local button. Perform a final validation of all data when the user clicks a global action button such as ‘save’ or ‘route’.	The majority of users prefer to correct errors as they progress through the document rather than correcting errors in multiple sections at the end of the process. Validating a row of data allows the user to correct mistakes before turning their attention to another item. Validating data item by item as the user tabs from field to field would cause too much of a drain on the system, reducing productivity.

Observations/ Comments	Recommendations	Rationale
<p>Participants wanted to know if a document could be validated when opened as well as when it is saved, routed, etc. This would allow the user to open a document to use as a template and to verify the accuracy of the data based on current values in the database.</p>	<p>7. Consider providing a feature that would allow the user to request validation for a particular document by clicking a button within the document.</p>	<p>Users will open documents for a variety of reasons and validating the data each time a user open a document is an unnecessary drain on the server. Allowing users to validate data <i>if desired</i> provides the flexibility for users to complete their tasks without performing unnecessary database operations.</p>
<p>Participants asked if a new document could initially be displayed with multiple rows for data entry in the table rather than a single 'add' row.</p>	<p>8. Retain the current design displaying a single add line for each section of a new document and allow users to enter data and add rows one at a time.</p>	<p>Given the variability in the number of items a user might want to add, the amount of information that must be displayed on the screen, and validation issues, providing a single 'add' line gives the user flexibility to complete their tasks without using more screen space than necessary. This also provides validation of each row of data so users won't be confronted with multiple rows of data with errors that need to be reviewed and corrected.</p>
<p>Some participants would like to tab from the final field in the 'add' row and have this automatically trigger adding the row to the table and validating the data rather than having to select the 'add' button.</p>	<p>9. Allow users to tab from the final field in the row to the add button and then hit return/enter to activate the validation and add the new row. When the new row is added, place focus on the first field in the add row so that users can continue to add more data without repositioning the cursor.</p>	<p>Provide shortcuts for users wherever possible.</p>
<p>Participants were pleased with the way errors were displayed.</p>	<p>10. Retain the current design</p>	<p>The current design clearly indicates the field containing the error, as well as providing a text message describing the problem. This allows the user to know what is wrong and what field to correct with just a glance.</p>

Observations/ Comments	Recommendations	Rationale
Participants would like the fields for 'Description' and 'Explanation' to match the typical size of the data that would be entered. Currently, the 'Description' field is too large and this section takes up too much screen real estate.	11. Display 'Org Doc #', 'Description', and 'Explanation' in one row rather than 3 and use a text box rather than a text area to capture description data. See Appendix B .	Whenever possible, reduce the amount of space needed for displaying items, especially on busy screens where the user would like to view as much data as possible without scrolling. Provide areas for capturing data that match the size of the data requested.
Most participants wanted the 'Doc Info' panel to default to open when the document was opened. Participants who didn't want this panel opened were concerned about having to scroll through a potentially long doc info section to get to the other panels.	12. When a document is opened, open the 'Doc Info' panel by default.	Many users will go to this section first and so having it opened will save the user time. For users who wish to view a different panel, the 'collapse all' button or the 'hide' button on the 'Doc Info' panel will allow users to quickly have access to a different panel without having to scroll down the page.
Account Info Pop-up Window		
Participants would like to see the account name (or sub-account name, object code name, etc.) displayed in the information screen.	13. Include item name in this screen.	The name is a crucial identifier that users are more apt to recognize than a number or code. Including the name in the information screen will allow the user to verify whether the selected account is the account desired.
Item Details		
Participants wanted to know if the stock number was user defined and suggested it would be nice if the data in this section could be tied to a database in a later version of the software.	14. Consider providing a database to store this department tracking information in a later release of the software.	

Pending Ledger		
Participants would like the debits and credits displayed in separate columns rather than indicated with a 'D' or 'C' in a separate column.	15. Replace the 'Amount' and the 'DR/CR' columns with two columns titled 'Debits' and 'Credits'.	Displaying all amounts in a single column and indicating the type of transaction in another column forces the user to look at an amount and then scan the table to find the type of transaction associated with the amount. Displaying debits and credits in separate columns allows the user to identify a transaction type and then quickly scan all values associated with that type.
Participants were concerned about determining if the debits and credits balance out to \$0.00 and were pleased to learn that error checking and business rules within the system will assure that items entered balance correctly.	16. Retain this feature.	Whenever possible, automatically determine values to help the user complete their tasks more efficiently.
Participants would like the option to generate the pending ledger prior to approving the document. Currently, the ledger is generated when the document is routed so the user has to approve the document and then go in and open it again to view the ledger.	17. If possible, given time and resource constraints, provide this feature.	Whenever possible, provide users with the flexibility to complete their tasks in the manner most convenient for them.
Routing		
Participants wanted to know if they could view the routing table prior to routing the document.	18. Consider implementing a 'Projected Routing' table that would show the typical path the document would route through for approval. The user would need to be aware that changes in the routing path are common and the projected path is not guaranteed. As the document routed, a table showing the actual path would need to be displayed.	Providing extra information can benefit users as long as the status of the information is clear – i.e. projected, pending, approved, final, etc.

Maintenance Screen		
Participants would like the 'current' values to automatically populate the editable fields in the 'new' column.	19. Display the current values as the default values in the editable fields.	In most cases, a change would not be made to every field in the record. Defaulting to the current values would allow the user to change the desired information without having to reenter existing data or select a 'copy all' function.
Participants would like an indication of which value has been modified when a record is routed for approval.	20. Highlight the modified row(s) so the approver can quickly located the data requiring their attention. Options include: color change for the modified rows, placement of an icon next to modified items, etc. See Appendix C for an example of highlighting changes using an icon.	Without some indication, the approver would have to scan each row comparing the current values to the new values in order to locate changes.
Participants want to keep a historical record of requested changes rather than having the document always reflect the current status of the database.	21. When a document is approved, retain the data and allow users to open a read only version of the document that is not tied to the current values in the database. Change the column label from 'Current' to 'Initial' or 'Original'. 22. Provide a link on the document for users to view the 'current' values in the database. See Appendix D .	Provide data in a manner that is useful to the user. A document from a year ago should reflect the values that were in effect at that time. Always provide an easy method for users to obtain the current values in the database.
Other		
Participants would like an indication of whether a document has notes associated with it or not, without having to open the 'Notes' panel.	23. Provide a numerical marker on the 'Notes' panel indicating the number of notes associated with the document. See Appendix E .	Users will know with a glance whether a document has notes or not and will not have to waste time opening the panel if no notes are included.
Participants would like to be able to scan a document and attach it to the eDoc. Will scanned documents be accepted?	24. Provide an easy method to attach documents to the eDoc. 25. Work with the functional team to determine any issues associated with scanned images and what scanning methods to support.	Supporting documentation will be necessary to many eDocs, so provide features that will facilitate the process. Determine if size limitations or other restrictions are necessary for attachments.

Observations/ Comments	Recommendations	Rationale
<p>Participants were concerned about the functions and labels for various buttons within the application. In particular, the 'close' button causing the document to be cancelled and all data lost.</p> <p>The functional team would like to be involved in determining the button labels and functions to be used within this system.</p>	<p>26. Change 'close' to 'cancel'. Provide a warning to users that all data will be lost and give them the option to continue or return to their document.</p> <p>27. Create a list of buttons and their functions to discuss with the functional team.</p> <p>28. Make sure that button labels and functions are consistent across all documents. For example, cancel on one document should have the same effect as cancel on another document.</p> <p>29. Buttons displayed must reflect the status of the document and of the user. For example, an approved document would no longer have an edit button and approvers would have an 'approve' button while the initiator of a document would have 'route' and 'cancel'.</p>	<p>Actions that will result in loss of data should be clearly presented and, in addition, the user should be given the option to return to their data after selecting such an option.</p> <p>Providing consistency in button labels and functions across eDocs will help the user work more efficiently without errors.</p>
<p>One participant suggested color coding the buttons so that the most likely option was in green and options such as cancel would be in red.</p>	<p>30. Determine a consistent placement and order for buttons with the most likely option on the left to help users accurately choose the desired option.</p>	<p>Consistent placement, labeling, and organization should be enough to help users without using colored buttons.</p>
<p>Participants would like to route incomplete documents. For example, one user initiates a document, filling in part of the required data and then routes to another user to complete.</p>	<p>31. If time and resources allow, provide an option for the user to route for completion. The user could specify a userID and route the document to that person. After the document was completed, it could be routed for approval.</p> <p>32. Alternatively, provide a feature where the user could save a document (rather than routing) and set permissions allowing a different user to go into the system and complete the data entry.</p>	<p>Allowing various users to work on a single document prior to routing for approval may be necessary for a variety of documents within the system.</p>

Observations/
Comments

Recommendations

Rationale

Participants liked the overall look of the system – “very pleasing to the eye”, “format looks great’.	33. Retain current overall design.	
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Appendices

Appendix A – Table Layout with Item Names

Transaction Detail - Income

	Chart	Account	Sub-Account	Object	Sub-Object	Project	Amount	Action
Add	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	\$ 0.00	

Figure 1: The income section of a new internal billing document

Transaction Detail - Income

	Chart	Account	Sub-Account	Object	Sub-Object	Project	Amount	Action
Add	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	\$ 0.00	
1.	<u>BL</u> This is the name	<u>19284983</u> This is the name of the account	<u>ABCDE</u> This is the subaccount name	<u>5000</u> Object name	<u>72-ABL</u> sub-object name	<u>This Project</u> project name data.. data..	\$ 11,647.94	
2.	<u>UA</u> This is the name	<u>28939898</u> This is the name of the account	<u>EDCBA</u> This is the subaccount name	<u>6000</u> Object name	<u>ABL-72</u> sub-object name	<u>That Project</u> data.. data.. project info	\$ 9,428.61	

Figure 2: The income section of an internal billing document with data entered

Figure 1 above shows the income section within the 'Doc Info' panel. When the user creates a new internal billing document, the income section contains a single 'Add' row until the user enters data.

Figure 2 shows the 'Income' section with data added. The name associated with any given number or code is displayed below the item and users can click on the ID number or code to obtain all relevant information about that item.

Appendix B – Document Info Layout

Doc Overview

Org Doc. #:	<input type="text"/>	Description:	<input type="text"/>	Explanation:	<input type="text"/>
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Figure 3: Doc Overview Information

Displaying the three items in the ‘Doc Overview’ section in a single row will reduce the vertical screen space needed so that the user can view more of the information on the screen without scrolling.

Appendix C – Highlighting a Modified Row

Attributes			
Current		New	
Code:	Code	Code:	<input type="text" value="Code"/>
Name:	Name	Name:	<input type="text" value="Name"/>
Manager:	Manager	 Manager:	<input type="text" value="Another Manager"/>
Chart Of Accounts:	BL	Chart Of Accounts:	<input type="text" value="BL"/>
Organization:	Org	Organization:	<input type="text" value="Org"/> 
Description:	Description	 Description:	<input type="text" value="Different Description"/>
Active:	Yes	Active:	<input checked="" type="checkbox"/>

Figure 4: Project Code Maintenance Screen

In figure 4 above, the arrows would indicate that the value for ‘Manager’ and the value for ‘Description’ have been modified. This allows the approver to easily locate and focus on the items in question rather than spend time identifying what has changed.

Note: when a document is routed, the new column may be displayed as read only rather than editable depending on business rules.

Appendix D – Archived Maintenance Screen Data

Attributes				View Current
Initial		New		
Code:	Code	Code:	Code	
Name:	Name	Name:	Name	
Manager:	Manager	→ Manager:	Another Manager	
Chart Of Accounts:	BL	Chart Of Accounts:	BL	
Organization:	Org	Organization:	Org	
Description:	Description	→ Description:	Different Description	
Active:	Yes	Active:	Yes	

Figure 5: Archived Maintenance Screen Data

Figure 5 shows an example of what a user might see when opening an old document. As shown in the example, the user would see the initial values, what values were changed, and what the new requested values were. A link is provided at the top of the section so users can view what the current values are in the database, if desired.

Appendix E – Indicating Notes

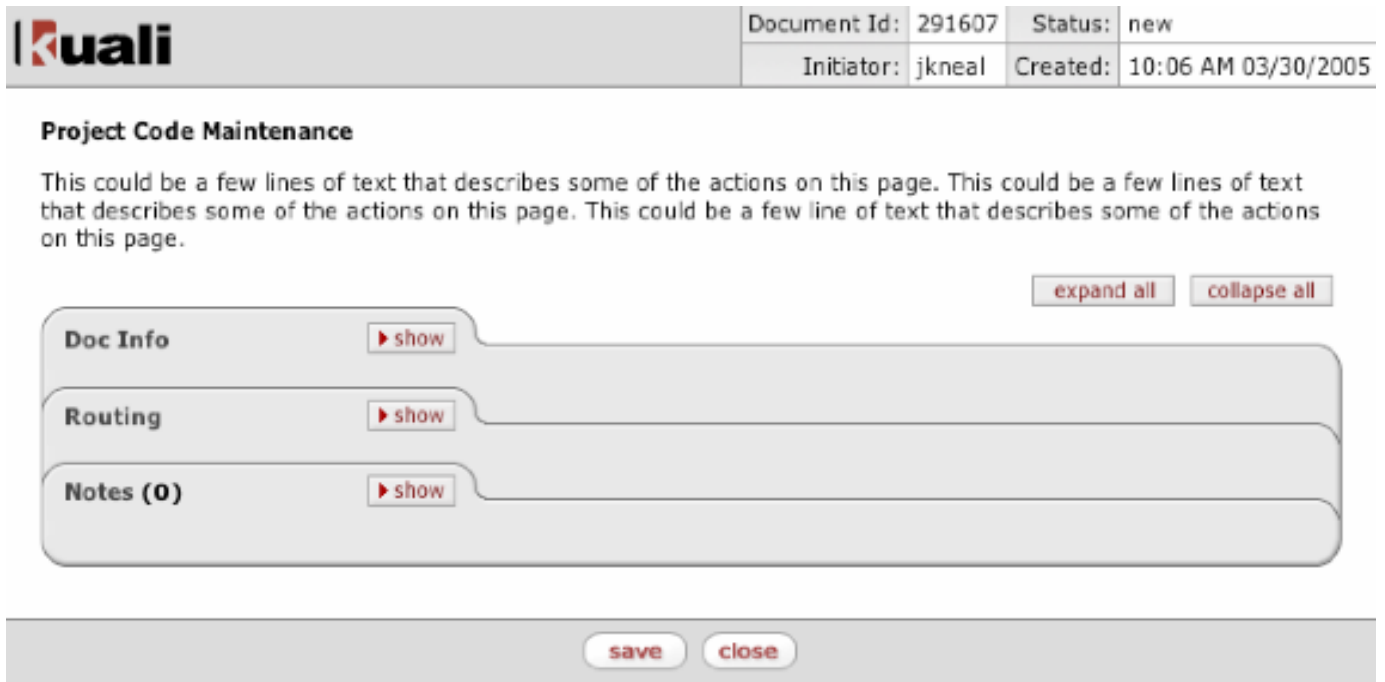


Figure 6: Document with no notes

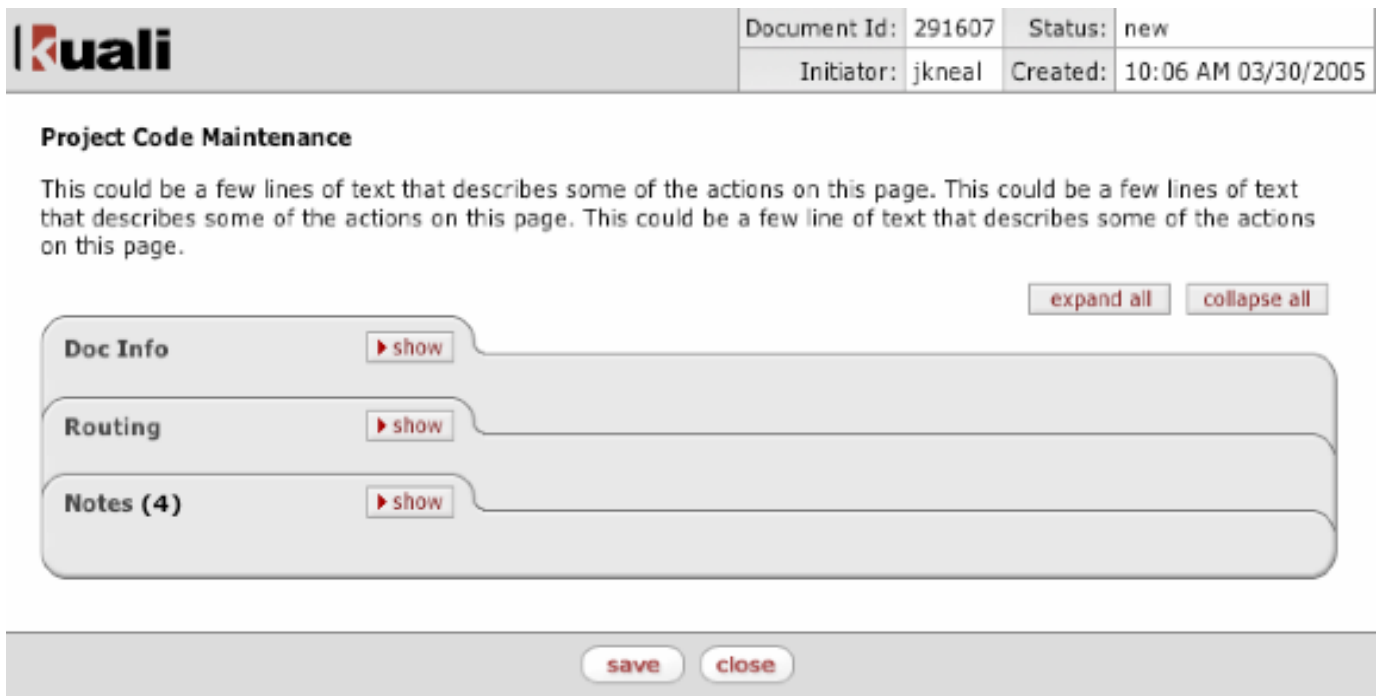


Figure 7: Document with 4 notes

Provide a numerical marker to indicate the number of notes associated with a document. Explicitly showing that a document has no notes, as in figure 6, will eliminate the need for the user to open the 'Notes' section if the document has no notes.