

EDEN Workflow: Usability Testing

Findings and Recommendations

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Executive Summary

In early December 2002, a short usability study of the EDEN workflow system was tested with three participants representing the HRMS user population. Paper prototypes of the Workgroup Review Hierarchy and Action List systems were used in the study. Participants were asked to perform a series of five different common procedures while using these systems. The tasks included: *adding a new entry to the hierarchy* (in both novice and expert modes), *creating a new workgroup*, *approving a document from the Action List*, and *searching for a document in the Action List*.

An overview of some of the key observations from this study reveals that participants were:

- comfortable with the Wizard mode, recognizing its value for applications that are new to them.
- able to quickly adapt to pulldown menus, and commented that the set of choices in the pulldowns helped them understand the inputs when the meaning of the label may have been unclear.
- recognized the Expert mode for its more efficient entry, particularly suited to frequent users. They considered the choice of both modes as valuable.
- able to understand the function of the Action List, and commented on its value for quick access to their work, but were confused on the meaning or significance of some of the columns.
- confused about the Document Search results. All of them failed to recognize the difference between Action List documents routed to them for action, and Document Search documents that had already been approved.
- generally positive about the prototypes overall. The results of the test suggest that some minor changes in sequence, layout, and function can make the Eden Workflow screens even more usable and ready for more complete testing with a wider selection of the user population.

Participant descriptions

Three participants took part in this round of testing. All three participants demonstrated the following characteristics:

- Familiar with the Chart and Org designations and with FIS review hierarchies.
- Had heard about the Action List in OneStart and of EDEN Workflow.

Test Activities

The five activities that participants were asked to perform with the paper prototypes were as follows:

Activity 1: Wizard to Add New Entry in HRMS Review Hierarchy

Activity 2: Wizard to Create New EDEN Workgroup

Activity 3: Action List to Approve Document

Activity 4: Expert Mode to Add New Entry in HRMS Review Hierarchy

Activity 5: Document Search to View Document

During each activity, the two evaluators observed the participant's performance and recorded their comments and actions.

These observations are reported in the following pages and presented as *Findings*. Each finding includes a table of recommendations, a small histogram indicating the incidence of participants' comments or suggestions, and a reference to the particular screen in the test binder (see example below).

	Recommendation	Incidence	Screen Reference
1.1	Make the "Reviewer" label more descriptive, e.g., "Reviewer User ID" or "Reviewer Network ID". Include an example following the field to indicate that a userID is required.	***	1.10

Finding 1: Terminology and Labels

Regardless of their experience levels, all three participants expressed uncertainty and/or confusion over some of the terms and labels used in the prototype. For the more experienced users of the FIS hierarchy, some inconsistency in the use of certain terms between FIS and HRMS posed particular problems that need to be considered.

	Recommendation	Incidence	Screen Reference
1.1	Make the “Reviewer” label more descriptive, e.g., “Reviewer User ID” or “Reviewer Network ID”. Include an example following the field to indicate that a userID is required.	***	1.10
1.2	Modify Action List Help to clarify difference between documents in Action List and already approved documents shown in Document Search	***	5.1
1.3	Expand on the term “Priority” to clearly indicate what purpose this information serves. Participants were unable to identify its purpose with confidence.	**	1.10, 1.14, 3.1
1.4	Change the term “From Date” to “Effective Date” in order to be consistent with the PeopleSoft system.	**	1.9, 4.1
1.5	Change the term “Document Title” to “Action List Title” in order to better indicate that this is a free form descriptive entry associated with the document.	**	2.12
1.6	Change Log column in Action List to “Route Log”	**	3.1
1.7	Clarify the option “Complete” in the pulldown menu for Action Requested. It is new term and participants are unclear as to whether it is a verb (to complete) or an adjective (already completed).	**	1.12, 4.1

Finding 2: Navigation

The navigational options for the Action List and the Expert Mode produced few difficulties for participants. The Wizard mode, however, introduced some challenges that need to be addressed if users are to avoid making errors in their saving and canceling actions.

	Recommendation	Incidence	Screen Reference
2.1	Change Save button functionality to save current contents, give verification and then remain in current screen. Participant wanted to do “precautionary saves”	***	Wizards
2.2	Add Close or Return button on last screen to return to Main Menu or Action List	***	last in Wizard
2.3	Advise user of difference between Back button and browser back arrow. If possible, remove the possibility for committing this error in the first place.	*	Wizards
2.4	Change Cancel button to “Exit”; move button to right margin, separate from other buttons; ask for verification before discarding inputs.	*	Wizards

Finding 3: Process

The most experienced participant of the three indicated a series of places in the current prototype where the workflow process came into question. While several of these issues are addressed in other Findings, the following recommendations deal with portions of the overall process involved in the applications.

	Recommendation	Incidence	Screen Reference
3.1	Clarify function of Active field in conjunction with Dates. Resolve whether Add Wizard should have Active field. Move Active field to Dates screen if field is needed.	*	1.14, 4.1
3.2	Add Approve column of buttons to Action List for quick approvals	*	3.1
3.3	Selecting Disapprove in Document Handler should send FYIs to prior approvers	*	

Finding 4: Data Entry

Many users who work with EDEN Workflow and the Action List will be using them frequently, and will require a highly efficient means of data entry if they are to be satisfied with the system. The Expert mode helps meet this goal. The direct entry of usernames, codes, etc. into text fields is also desirable for this audience. Users should be able to keep their hands on the keyboard throughout the process and not have to switch between the keyboard and mouse unless they want to.

There will also be users who interact with the system infrequently, thereby requiring assistance with selecting valid values, and making appropriate choices. For these people, efficiency is less important, while error reduction and feedback that they have done the right thing become more significant.

	Recommendation	Incidence	Screen Reference
4.1	Priority field should have pulldown list of valid values	***	1.14
4.2	Date fields should have formats indicated (mm/dd/yyyy)	**	1.9, 4.1
4.3	Required fields should be marked; Date fields should be easily interpreted as optional	*	1.9, 4.1
4.4	Add People Search icon and functionality, similar to capability in Document Search, to select user ID	**	1.10, 2.9, 4.1
4.5	Change Action List Title default to string based on other fields	**	2.12
4.6	Change Org to two input modes: 1) a text input field for quick entry of 4-character code, with 2) an adjacent pulldown list for alternate selection. Users often known and enter just the code.	*	1.4, 2.7, 4.1
4.7	Add Calendar Search icon and functionality to date fields	*	1.9, 4.1
4.8	Add check for unique Workgroup Name in Chart / Org	*	2.1
4.9	Use “All Members” and “Any One Member” radiobuttons for Group Action Policy in Workgroup	*	2.3
4.10	Change default Chart and Org to those of user	*	1.4, 2.7, 4.1
4.11	Additional Notes field should be provided for each Reviewer and identified by user name and Chart / Org	*	last Wizard

Finding 5: Help

There are bound to be terms and parts of the process that are unfamiliar to some users no matter how well the system is designed. For these situations, additional assistance needs to be available when people need it, without getting in the way.

	Recommendation	Incidence	Screen Reference
5.1	Use “?” character for Help / Information icon	*	all
5.2	Add Help icons and entries for Additional Notes and Action List Description fields (or simply add descriptors to the labels or provide a suitable example to help clarify what these items are for).	*	2.12
5.3	Add Help icons and entries for each column header in Action List. (Avoid cluttering the screen in this instance, however!!!)	*	3.1

Finding 6: Organization and Sequence

Once all of the outstanding process issues have been verified, the sequence of screens need to be optimized to present related information in chunks, and to reduce the number of overall screens whenever possible.

	Recommendation	Incidence	Screen Reference
6.1	Make link to Document Search more obvious in Action List. (Perhaps by adding to the first row of results rather than placing up above where the user might not notice it?)	***	5.1
6.2	Place Action Requested and Reviewer on same screen, in that order.	**	1.10, 4.1
6.3	Place User / Workgroup radio buttons immediately above Reviewer.	*	1.10, 4.1
6.4	Move Position Type before Document Type in HRMS Review Hierarchy	*	1.7, 4.1
6.5	Place Chart, Org, and Workgroup Name screens on same screen, in that order.	*	2.1, 2.5, 2.7

Finding 7: Feedback

Several places within the current prototype related to both navigation and data entry require additional feedback. For navigation, additional feedback following such actions as Cancel and Save are required to confirm the result of their actions. For data entry, additional feedback will help to assure users that their actions were entered as intended.

	Recommendation	Incidence	Screen Reference
7.1	Display selected Workgroup Members with user name, and Chart / Org	**	2.10-2.12
7.2	Add feedback on Cancel to choose to continue and verify choice	*	Wizards
7.3	Add feedback on Save to verify action	*	Wizards
7.4	Add indicator of number of remaining screens, e.g., “2 of 10”	*	Wizards
7.5	Display all current nodes in Route Log entry, even those not yet approved	*	