



MAX PLANCK
digital library

User Interface Engineering

Ausblick R4 (GUI V2) mit Schwerpunkt Evaluation

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User Interface Engineering

Vorgehensweise

1. Usability Evaluation

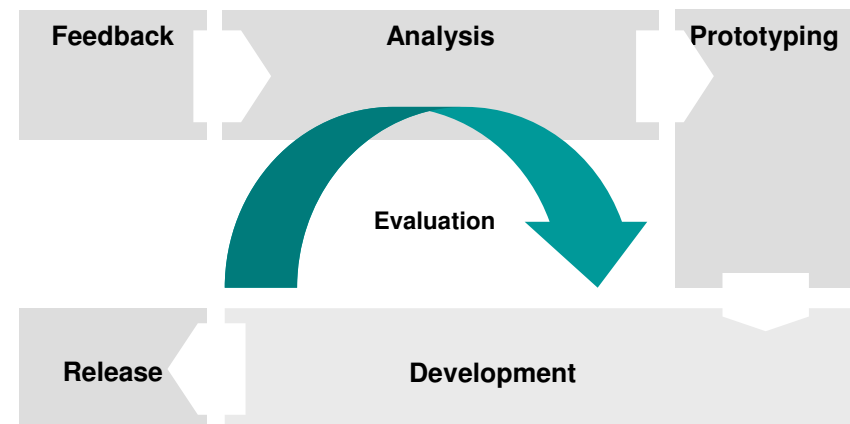
- Sammeln von objektiven Anforderungen aus Usability Methoden:
 - „Expert Interviews“
 - „Thinking aloud“
 - „Workshops“

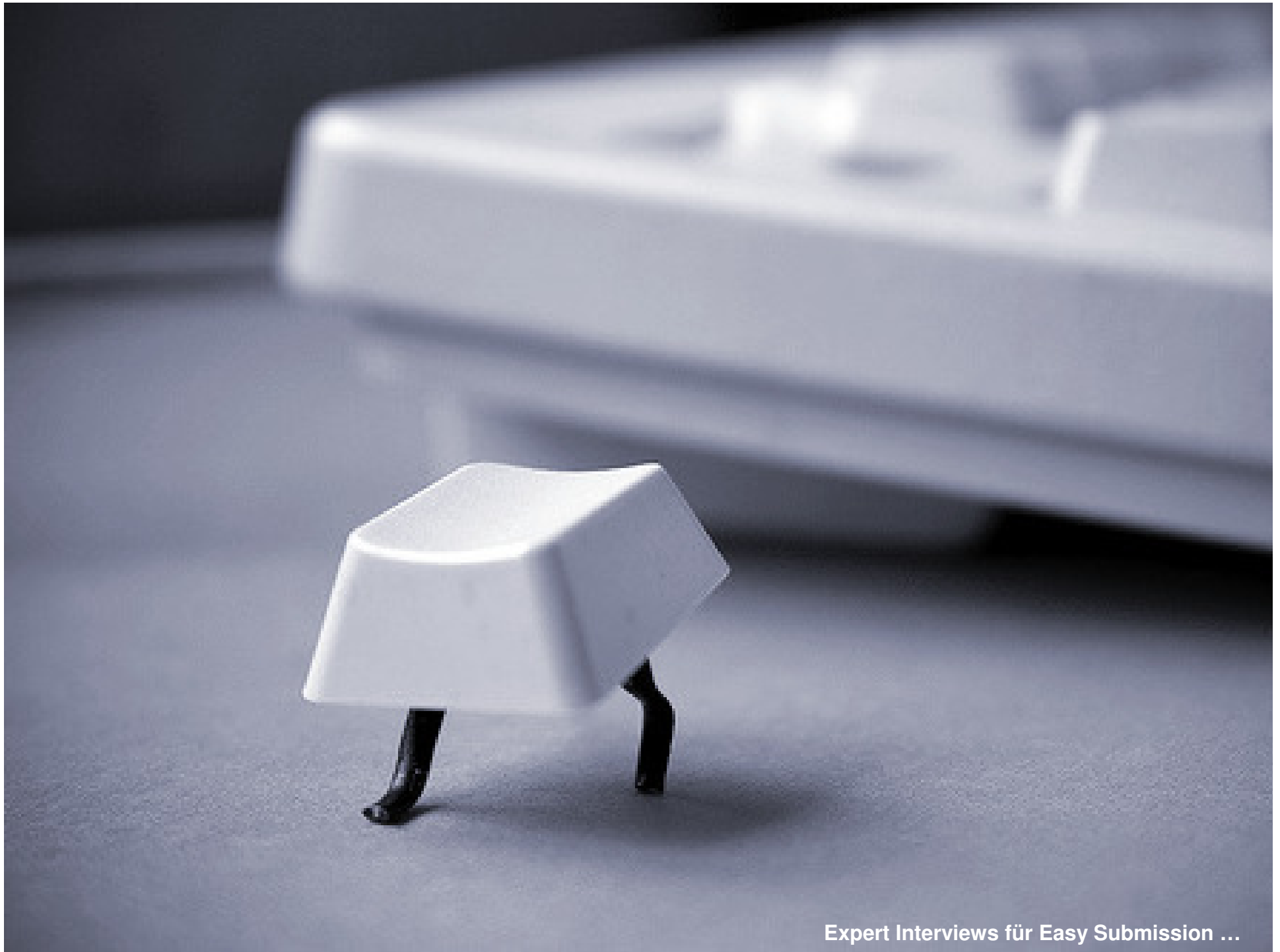
2. Konzeption & Design der grafischen Benutzerschnittstelle

- Erstellen und beschreiben von klickbaren Prototypen

3. Programmierung der Benutzerschnittstelle

- Umsetzen der Konzeption
- Trennen von Inhalt, Gestaltung und Verhalten





Expert Interviews für Easy Submission ...



Evaluation: Expert Interviews

Beispiel Easy Submission

Ergebnisse aus Interviews in Garching und München

- zu viele Felder in einer Maske
- bessere Trennung von Wichtigem und weniger Wichtigem
- Übersichtlichkeit ohne Scrollen
- keine klare Übersicht über notwendige Eingaben (mandatory Fields)
- mehr Automatisierung – weniger redundantes Tippen

Easy Submission

Entstehung

Testperson A

Title

Source Title

TYPE IS A TITLE BECAUSE ...

Creators

Authors

Surname, Name
Surname, Name
Surname, Name

Organizations

MPI PP
MPI PP
MPI PP

Source

Source

Genre of Source

Paper

ID Type

ID Value

Dates (depending of the publication status) Further source data, depending on the genre of the source.

Genre of Publication

Paper

Keywords & Abstract

Keywords

Keyword 1, Keyword 2, Keyword 3, Keyword 4, Keyword 5, Keyword 6, Keyword 7, Keyword 8, Keyword 9, Keyword 10

Abstract

...

Files

Convenient file upload (files & folders)

Testperson B

[illegible]

Workshop Feedback

Step 2 ✓

Step 3

Step 4

Please fill in basic information about your publication. Only genes defined in your current collection are possible ...

Gene
Paper

Source Title
type in n_eilar here ...

File 1 C:\publication.pdf
File 2 C:\publication\pdf

Content Type: Preprint
Content Type: Preprint

Browse

Upload

Next

Step 1 ✓

Step 2 ✓

Step 3

Step 4

Please fill in one or more authors of the publication. At least one author with an affiliation is mandatory

Nr.	Creator Type	Organization Name	Name	Family name	Role	Affiliated to	Actions
#	Person	-	Peter	Miller	Author	MPI P	Remove
#	Person	-	Peter	Miller	Author	MPI P	Remove
#	Person	-	Peter	Miller	Author	MPI P	Remove
12	Person	-	Peter	Miller	Author	max planck	

Back

Mac Planck Generalverwaltung
Mac Planck Psycho
max planck berlin
max planck extralaboristische
max planck institute
max planck society
max planck institut
max planck gesellschaft
max planck institute for evolution...
max planck institute germany

Step 1 ✓

Step 2 ✓

Step 3 ✓

Step 4

Please fill in one or more authors of the publication. At least one author with an affiliation is mandatory

YYYYMMDD

Date published in print

Source Title

type in n_eilar here ...

Subject

Abstract

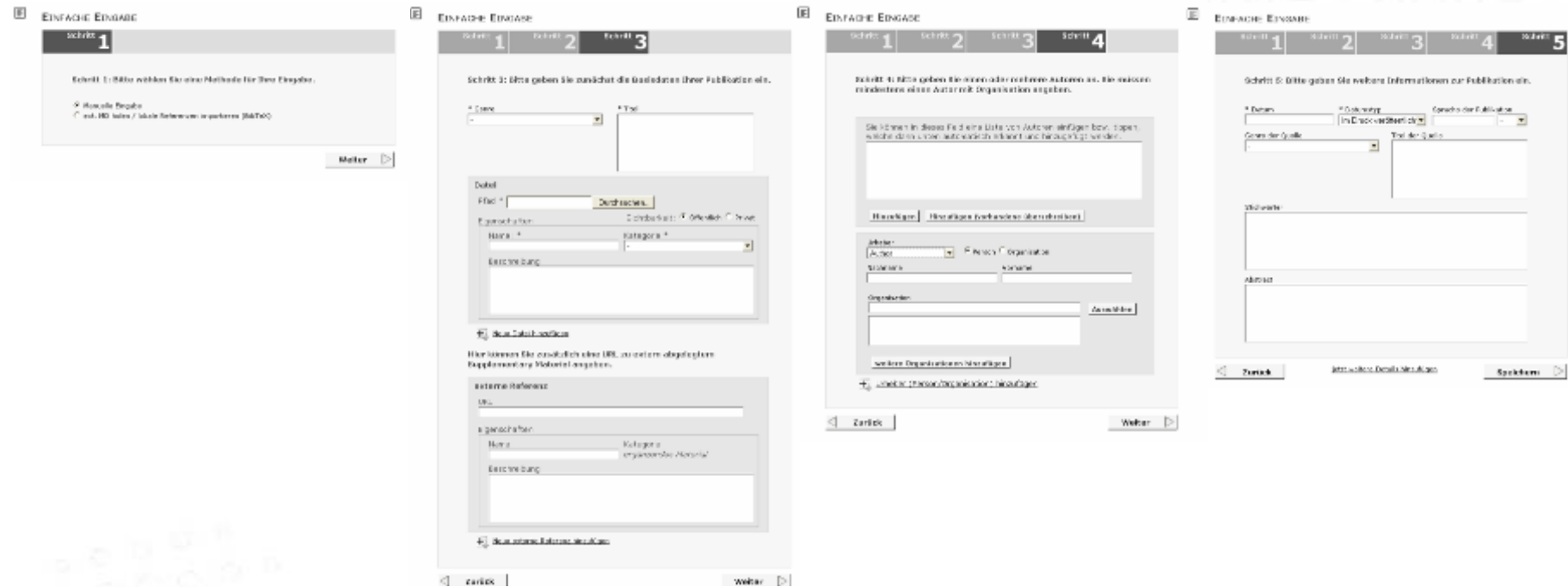
Back

Preview

Easy Submission

Entstehung

Umsetzung in Release 3.8



The image displays four sequential screenshots of the 'Einfache Eingabe' (Simple Input) form, labeled 'Schritt 1' through 'Schritt 5', illustrating the submission process in Release 3.8.

- Schritt 1:** The user is prompted to select a method for their request. Options include 'Manuelle Eingabe' (Manual Input) and 'via URL laden / Daten heruntergeladen (BibTeX)' (Load data via URL / Download data (BibTeX)). A 'Weiter' (Next) button is at the bottom right.
- Schritt 2:** The user is asked to provide basic publication data. Fields include 'Name' (with a dropdown), 'Titel' (with a dropdown), 'Datum' (with a date picker), 'Pfad' (with a dropdown), 'Erscheinungsjahr' (with a dropdown), 'Kategorie' (with a dropdown), and 'Erscheinungsort' (with a dropdown). A 'Weiter' button is at the bottom right.
- Schritt 3:** The user is asked to provide author information. Fields include 'Autor' (with a dropdown), 'Pseudonym' (with a dropdown), 'Schreibweise' (with a dropdown), 'Organisationsname' (with a dropdown), and 'Anrede' (with a dropdown). A 'Weiter' button is at the bottom right.
- Schritt 4:** The user is asked to provide additional information. Fields include 'Abstract' (with a text area), 'Zusätzliche Informationen' (with a text area), and 'Anmerkungen' (with a text area). A 'Weiter' button is at the bottom right.
- Schritt 5:** The user is asked to provide final information. Fields include 'Titel' (with a dropdown), 'Zusätzliche Informationen' (with a text area), and 'Anmerkungen' (with a text area). A 'Weiter' button is at the bottom right.

Easy Submission

Entstehung

Geplante Umsetzung in Release 4

The screenshot shows the 'Easy Submission' interface. At the top, there are three tabs: '01', '02', and '03'. The '01' tab is selected. Below the tabs, there is a heading 'Step 1: Please fill in basic information about your publication'. The form consists of several rows. The first row is for 'Title', with a text input field containing 'New book of publication from' and a dropdown menu. The second row is for 'Date', with a text input field containing '1980'. The third row is for 'URL', with a text input field containing 'URL' and a 'Review' button. The fourth row is for 'DOI', with a text input field containing 'DOI' and a 'Save' button. A blue button labeled 'Add' is located at the bottom right of the form.

Easy Submission

01 02 03

Step 2: Please fill in your name and home, M. last, name and how will it all look like in the future.

last authors

Provide copy or paste evidence for last data, which are last, present and add. immediately to the the checking the "Add" button.

Add authors Add authors (predefined availability)

Direct link

Type ☒ Errors ☐ Dependence

Form type

UNIVERSITY

Name Submit

ADDRESS

+ = +

The screenshot shows a web interface titled "Easy Submission". At the top, there are three tabs labeled "01", "02", and "03". The "01" tab is active. Below the tabs, there is a heading "Step 1: Please fill in basic publication information." and a sub-heading "Submit Paper".

The form contains the following fields:

- Title:** A text input field with the placeholder text "Title of your submission".
- Author:** A text input field with the placeholder text "Author of your submission".
- Details:** A section containing several fields:
 - Date:** A text input field.
 - Type of Work:** A dropdown menu with the selected option "Public and in Print".
 - Long paper or Pre-Submission:** A dropdown menu with the selected option "Yes".
 - Free Expression:** A text input field.
 - Abstract:** A text input field.

At the bottom of the form, there are two buttons: "Back" and "Save & Next".



Evaluation: Workshops

Beispiel Advanced Search

Advanced Search: Workshops in Berlin und Nijmegen

Ergebnisse aus dem Workshop

- Advanced Search zu komplex
- Zu wenig Schwerpunkt auf häufig genutzte Felder
- Zu viel Scrollen notwendig

Als Beispiel wurden vergleichbare Suchen anderer Webanwendungen vorgeschlagen und gemeinsam bewertet.



Advanced Search

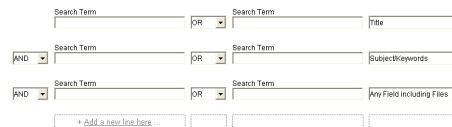
Entstehung

R2 (Ohne User Feedback)



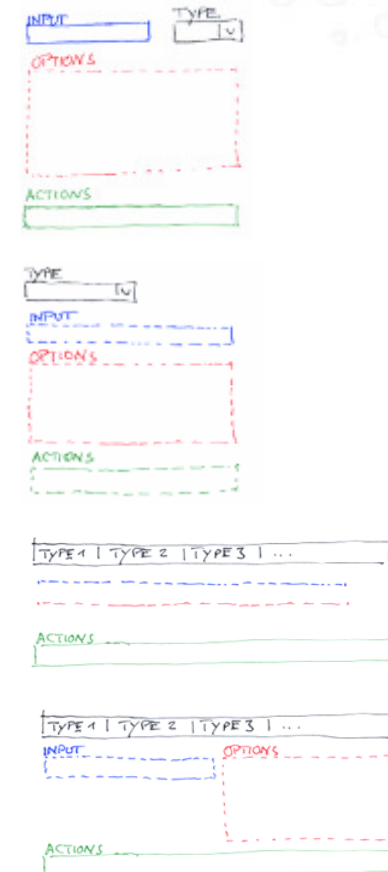
The R2 interface is a complex, multi-sectioned form. It includes sections for 'Language of the results shown', 'Search Terms' (with a list of terms like 'author', 'title', 'subject', etc.), 'Publication' (with a list of publication types like 'journal', 'book', etc.), 'Date' (with a list of date ranges), and 'Format' (with a list of formats like 'HTML', 'PDF', etc.). Each section has a 'Show/Hide' button and a 'Next' button at the bottom.

Beispiel aus Workshops



The workshop example shows a clean, simplified search interface. It features a 'Search Term' input field, a 'Type' dropdown menu, and a 'Subject Keywords' dropdown menu. There are also 'AND' and 'OR' buttons for combining search terms. A '+ Add a new line here' button is located at the bottom.

Redesign



The redesign is a hand-drawn sketch of a search interface. It features a 'TYPE' dropdown menu, an 'INPUT' field, and a 'OPTIONS' section (indicated by a dashed red box). Below these are 'ACTIONS' (indicated by a green box). The interface is divided into sections for 'TYPE 1', 'TYPE 2', and 'TYPE 3'. The 'INPUT' field is a blue dashed box, and the 'OPTIONS' section is a red dashed box. The 'ACTIONS' section is a green box. The interface is divided into sections for 'TYPE 1', 'TYPE 2', and 'TYPE 3'.

Advanced Search

Entstehung

R4 Prototyp

Advanced Search	
Term	<div>Term <input type="text"/></div> <div><input type="checkbox"/> Include Files <input type="radio"/> Title <input type="radio"/> Keywords <input type="radio"/> Any Field</div> <div>Find <input type="button" value="v"/></div>
Creator	<div>Name <input type="text"/></div> <div><input type="checkbox"/> All <input type="checkbox"/> Author <input type="checkbox"/> Editor <input type="checkbox"/> Advisor</div> <div>And <input type="button" value="v"/></div>
Date	<div>From <input type="text"/> To <input type="text"/></div> <div><input type="checkbox"/> All <input type="checkbox"/> publ. in print <input type="checkbox"/> publ. online <input type="checkbox"/> publ. in print</div> <div>And <input type="button" value="v"/></div>
Genre	<input type="button" value="Open"/>
Organization	<input type="button" value="Open"/>
Event	<input type="button" value="Open"/>
Source	<input type="button" value="Open"/>
Identifier	<input type="button" value="Open"/>
Language of Publ.	<input type="button" value="Open"/>
<input type="button" value="Start Search"/>	



Usability Interviews am Beispiel Eingabemaske ...

Evaluation: Usability Interviews

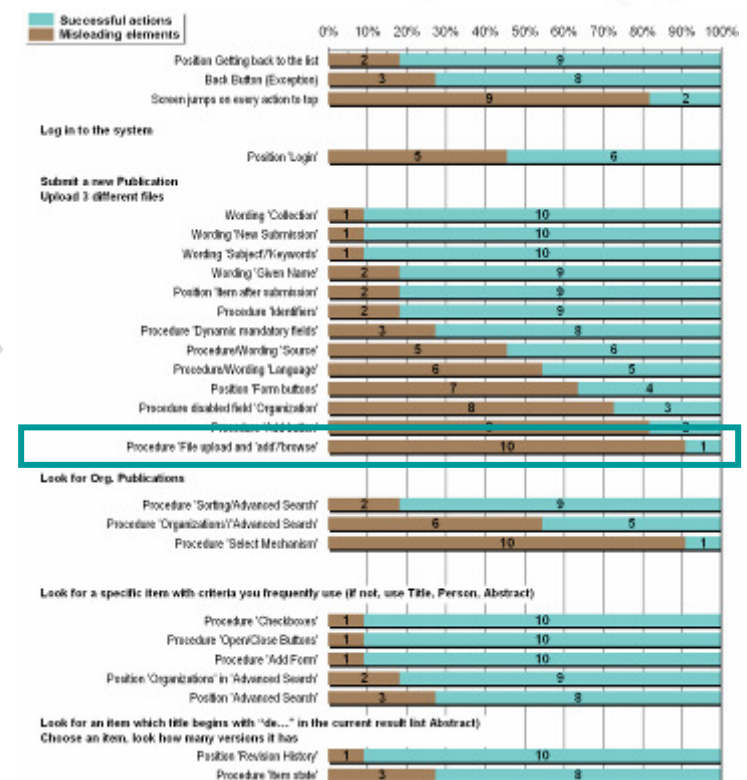
Beispiel: Analyse und Umsetzung von Änderungen

Interviews (8-10)

Auswertung

Gewichtung

Group of Applications / Functions	Tasks / Goals	Issues / Problems	Issues / Problems
General Application	Task: General	Position: Page	1
		Position: Setting back to the list	2
		Back Button (Exception)	3
		Screen jumps on every action to top	9
Meta Menu	Log in to the system	Position: 'Login'	5
Submission	Submit a new publication item	Working 'Collection'	1
		Working 'New Submission'	1
		Working 'Subject/Keywords'	1
		Working 'Given Name'	2
		Position: Item after submission	2
		Procedure: 'Add Item'	2
		Procedure: 'Dynamic mandatory fields'	2
		Procedure: Working 'Source'	2
		Procedure: Working 'Language'	2
		Position: 'Form buttons'	2
		Procedure: disabled field 'Organization'	2
		Procedure: 'Add button'	2
		Procedure: File upload and 'Add/Browse'	10
			1
Organizations	Look for publications of the Max Planck Society	Procedure: 'Sorting/Advanced Search'	2
		Procedure: 'Organizations/Advanced Search'	6
		Procedure: 'Select Mechanism'	11
Search	Look for a specific item with criteria you frequently use (if not, use Title, Person, Abstract)	Procedure: 'Checkboxes'	1
		Procedure: 'Open/Close Buttons'	1
		Procedure: 'Add Item'	1
		Position: 'Organizations' in 'Advanced Search'	2
		Position: 'Advanced Search'	3
			3
Links	Look for an item which title begins with 'de...' in the current result list	Position: 'Revision History'	1
		Procedure: 'Item state'	3
		Choose an item, look how many versions it has	5
Export	Create a publication list from a	Position: 'Select Dropdown'	1
		Procedure: 'Select Mechanism'	3
		Procedure: 'Select Item/Export'	4





Evaluation: Usability Interviews

Beispiel Submission/File Upload

R2 (Ohne Evaluation)

File			add
File			upload
Path	<input type="text"/>	Durchsuchen...	

- Keine Differenzierung zwischen add und upload (Wording, Tooltips)
- Reihenfolge suggeriert “Drücke zuerst auf add !”
- Zu eng aneinanderliegende, klickbare Elemente
- Keine Reihenfolge gesetzt: Alle Schaltflächen sind klickbar aber “Durchsuchen” sollte zuerst gedrückt werden, dann upload und add nur optional
- Lücken zwischen Beschriftungen und Elementen erschweren die Zuordnung

R4 Komponente “File Upload” (nach Interviews)

Add New File	Path		Choose File	upload
		<input type="text"/>		



'Usability matters!'



Ausblick anhand des R4 Prototypen ...

- Achtung: Ein Prototyp ist **keine** 1:1 Abbildung der Umsetzung
- Der Prototyp ist **kein** Entwicklungsstand, sondern eine Aneinanderreihung von "Bildern"
- **Nicht Alles** was im Prototyp zu sehen ist, ist auch Gegenstand von R4, sondern kann auf mehrere Releases verteilt werden

