Rituparna Saha

Sr. UX Designer

UX PORTFOLIO

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No. 202122EMDP08/ 039

भारतीय प्रबंध संस्थान कोझिकोड

Indian Institute of Management Kozhikode

eMDP

Professional Certificate Programme

This is to certify that

Rituparna Saha

participated and successfully completed the programme

Design Thinking & Innovation Management

(April 22, 2021 - October 28, 2021)

Programme Facilitator | Chairperson - MDP | Director

I'm Rituparna, an astute Certified Usability Analyst (CUA)™ from HFI (Human Factor International) and Certified in Design Thinking and Innovation Management from the Indian Institute of Management (Kozhikode), with expertise in building and designing UX Strategies.

Over the past 10 years, I've created the product and design solutions for clients across various domains like Enterprise Active Invoices with compliance, Enterprise Business Validation Services, Enterprise Active intelligence, Enterprise Intelligent Web Forms, Enterprise Advance shipment Notice, Banking & Finance, Real Estate, Travel & Hospitality, Manufacturing & Logistics, E-learning.

Closely worked with the Business and Development team to create enriched web applications and products. I have learned to identify and incorporate consumer needs into user screens using my creative skills in the best possible way to develop complex things into an easy and creative way that speaks to the end user's goals by embracing new technologies.

I am an individual contributor and manage multiple products. I love giving back to the design community by mentoring designers, sharing design best practices, take an active role in design workshops. Well acquainted with agile methodology.

Denova Glosoft Ltd.
Web Designer
July 2012 – Feb 2013

AMS Technologies Pvt. Ltd.
Web Designer
March 2013 - May 2014

Magna Infotech Ltd.
Web Developer
October 2014 – April 2015

Agency Africa Pvt. Ltd.
Web Developer
May 2015 – March 2016

Procentris (India) Pvt. Ltd.
UI Developer
March 2016 – August 2016

Cognizant Technology Solutions
Senior UX Designer
August 2016 – January 2021

OpenText Technologies
Senior UX Designer
February 2021 – Till Date

Key Clients

opentext™ | Business Validation Services

opentext™ | Active Invoices with Compliance

opentext™ | Intelligent Web Forms

opentext™ | Advance Shipment Notice

opentext™ | Active Intelligence

Microsoft

AllianceData

KPMG Clara

PACCAR

TNMP

AVM

CAMBRIDGE UNIVERSITY PRESS

CUSTOMER SPACE X

storebrand

TRANE

Process

Plan to identify appropriate approaches and milestones for UCD into the overall design and development process. **Learn** and understand the user needs, expectations, context, technologies.

Explore and **Analyse** the user needs by building user profiles on gathered data, producing materials that will aid the outlining of the project IA, concept sketches, task flows, user journey, scenarios.

Create a solution based on the research findings, develop concept sketches, low fidelity prototypes, interactive prototypes, details design. **Refine** and evaluate design with stakeholders to obtain feedback. The **Usability Testing** technique uses to validate the solution across the user segment. **Deliver** complete design and produce deliverables.

Organizational Activities

Apart from project deliverables I take part in team building activities which helps developing the skills and knowledge of team mates, strengthen the bonds and is a silent confidence booster.

In **peer review**, I play role of both presenter and reviewer for different peers in 1:1 and groups. Catch up with current works and encourage providing feedbacks.

Workshops are based on any design related topics, where participant engagement is must. Sometimes it turns into a design discussion. The workshop sometimes designed including the cross-functional team to join to get some knowledge on user experience.

Fun Friday or other **fun activities** are designed to work as a coolant while sitting on a hot seat loaded with work.

Showcase

Business Validation Services

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About

BVS is a rule engine originated with a requirement from BMW who requested for more than just mandatory validations to align with their compliance needs.

This resulted in BVS being developed in the year 2020, planned for pilot deployment by mid 2021.

- BVS helps other products to focus on their core product functionality and utilize BVS as the validation engine to be invoked as and when required.
- It removes dependency on engineering by making these validations configurable by authorized users (PS to start with and later extend to customers).
- Supports configuration of conditional validations in addition to the currently available mandatory, field presence checks.

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Handover

BVS is a new product which is been developed for a year, where a few initial screens were developed with a mindset where users can utilise BVS validating the business documents. I noticed that the initial screens were having severe usability issues, which then became my primary focus to take into attention to the product manager and team with rationale and ask to go for incremental enhancements.

Heuristic evaluation

Without any delay I started the heuristic evaluation on the developed screens and presented the analysis document in front of the product manager. Later included the cross functional team to get an understanding on what are those pitfalls and challenges, that needs immediate change. With all the valid analysis documents it was less tough than was expected, in context to push for the enhancements and a fresh JIRA was created for incremental enhancements.

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Heuristic evaluation

Severity type - Showstopper

Problem Area - H2, H6, H8

Problem description - The grouping fails to explain the visual hierarchy. The repetative information and gaps in between is confusing and creating maximum cognitive load to recall.

Not easy to identify with the paired values defined inside old and new.

Due to repetative information there is information overload and a lot of eye scanning happens, increasing the visual load.

Solution - Proper grouping with minimal and sleek presentation.

VIMM model induced.

AS per OT the severity comes under CRITICAL

Problem description - For primary UI elements, there are obvious alignment issues, obvious inconsistencies with visual presentation; or, numerous minor cosmetic issues resulting in an unprofessional or sloppy appearance.

New screen suggested

New ideas which are applauded

I did a contextual enquiry on the proposed screens to anticipate the customer behaviour partnering with my Product manager. Below are some of the new ideas that got high appreciation. My contribution was recognised with a high-five award.

The Beginning of a new requirement

I still remember the very first day when I got the JIRA notification mail and my product manager pinged me in the teams and wanted to discuss the JIRA created while setting a call between cross-functional teams.

That's how it started, first with 1:1 with product manager and later a collaborative discussion session including the product owner, the solution architect.

Being a listener on the very first day, I remember it was a confusing discussion on a few pieces of statements that came from the client-side (BMW). The users are Opentext professional services.

It is then announced that BVS is going to play a major role in future when it will become customer facing and most of the Opentext products can use BVS for the validations purposes. Hence I had a clear idea that the user experience need to focus on maximum flexibility and easy to use with clear upfront guided navigation.

Use Case:

1. Check if a value satisfies minimum or maximum length,
2. Verify format of date, date time, SSN, Zip code etc.
3. Verify that the field begins, contains, or ends with a specific string.

EXAMPLES

- Invoice number should start with 'INV' + 8 digits.
- Invoice should be between 6 – 12 digits
- Exempt reason can be any of

  - Exempt intra-Community supply of goods according to article 138 Directive 2006/112/EC
  - Supply of goods under the simplified triangulation regime according to article 141 Directive 2006/112/EC
  - VAT due by the contracting party according to article 197 Directive 2006/112/EC
  - Export supply of goods exempt from VAT according to article 146 Directive 2006/112/EC
  - Triangulation

In addition, the reason in the EDI file may not contain the whole sentence.

- Eg: The exemption reason implying "Exempt intra-Community supply of goods according to article 138 Directive 2006/112/EC" maybe sent in the EDI file in any of the following ways or more.
- Exempt intra-Community
- Exempt intra-Community supply of goods
- Exempt intra-Community supply of goods according to article 138
- Exempt intra-Community supply of goods according to article 138 Directive 2006/112/EC

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Approach & Strategy

Within a few discussions, I concluded that the first task would be to break the ice by cracking the requirement statements first.

Hence, I planned to document things from the first day on the clues and the point of direction that will come out during these discussion sessions. Going forward that can help me to refer, identify, eliminate accordingly in the critical scenarios.

Design maturity

User-centric

- Design is seen as a way to solve problems.
- Ice breaking sessions to understand the business need mapping with user needs.
- Considering user's mental model and built to that.

Interface design and interactions

- Convert research input to concept sketches, journeys, interactive prototypes.
- Design solution validation/ usability testing of a specific section or flow.

WOW factors

- Presentation is key for success.
- Visual colours, images, fonts should reflect the branding.
- Design system first.

My Role

As an individual contributor, I report and collaborated with the product manager, product owner, solution architect. As part of this work, I facilitated collaborative sessions & usability sessions and documented them.

Most of the validations of my ideas were through 1:1 meetings, design critique sessions, and team presentations.

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Ice Breaking Session

The ice-breaking session was based on the requirement statement where it was mentioned about the operators which can be paired with multiple fields and values to create a rule.

In the discussion probe in and around the statement and ask to share their views. We discussed the probable look around to connect the dots of every point discussed in the session.

The sessions came out fruitful. I could able to understand and gather different views and examples shared by the team and can relate them to the existing requirement.

We discussed the scopes and try to understand what are the elements that are needed to create a conditional rule. Tried to identify the new elements while keeping the existing flow, also discussed what could be the probable attributes for these new elements.

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Connecting the dots with similar system studies available in market

Research

1. Field name - The first part allow user to describe what he/she wants to achieve with this rule using the conditional logic.

2. Condition - Is the statement refer to a field and must be fulfilled. Condition consists of Operators.

Operator - different operators are used to evaluate the condition.

3. Value type and Value - The way Value type and value will be defined are going to vary according to the type of field and the type of operator.

Mapping the Conditions/Operators with their related data fields (probable) -

1

Conditions/Operators	Definition	Value type
Equals / Does not equal	Checks if the answer is an exact match to another value.	• Freetext • Integer/Decimal/Currency • Date/Time/Date|Time • Duration
Matches / Does not match		
On		
Before		
After		

Field name	Condition	Value type	Value
Lorem ipsum	Equals	Free text	INV
Lorem ipsum	Matches	Date mm/dd/yy	06/16/21
Lorem ipsum	Matches	Date dd/mm/yy	16/06/21

2

Conditions/Operators	Definition	Value type
Less than	Checks if the answer is lower than another value / higher than another value / falls between (but is not equal to) two other values.	• Integer/Decimal/Currency • Date/Time/Date|Time • Duration
Greater than		
Between		

Field name	Condition	Value type	Value		
Lorem ipsum	Less than	Integer/Decimal/Currency	$15		
Lorem ipsum	Greater than	Duration	Minutes Hours Seconds	30 min	
Lorem ipsum	Between	Date dd/mm/yy		and	

3

Conditions/Operators	Definition	Value type
Begins with	Checks if the answer begins with / ends with of the given value.	• Freetext • Integer/Decimal/Currency • Email / Phone number
Ends with		

Field name	Condition	Value type	Value
Lorem ipsum	Begins with	Free text	INV
Lorem ipsum	Ends with	Email / Phone number	p.s@g.com

4

Conditions/Operators	Definition	Value type
Minimum of	Checks if the answer is minimum of / maximum of the given value.	• Free text • Integer/Decimal/Currency
Maximum of		

Field name	Condition	Value type	Value
Lorem ipsum	Minimum of	Integer/Decimal/Currency	$15
Lorem ipsum	Maximum of	Free text	8 digits

Brainstorming - redefining the use case

While explaining the research about the different conditional operators that support the field type or value type, and giving examples of how it might work with conditional statements, the cross-functional team could identify that the conditional operators are not only the best combinations to create the conditional rule.

To create a conditional statement on country-specific TAX rules or VAT rules we need to include math operators. As there was more clarity on the requirement side, we gradually started exploring the math operators and the probable use cases.

Brainstorming - redefining the use case

We started discussing the other attributes that can pair with the math operators, combinations that can be needed from the user side to create a conditional rule. Moving forward, with these existing data the Product Manager was able to gather some more insights from the business side and we then gradually started working on those points.

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User touch points - task flow

Empathy is the core of understanding - the right problems to the right audience.

On that note, I created the task flow to identify the traces of user's possible paths through sequences of tasks (from creating multiple conditions in a condition set and then defining the actions within the action set) and decision points (on defining the error messages) while accomplishing their goal.

It validates the understanding of the user goals from one touchpoint to another and helps identify the common scenarios.

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Concept sketches

The best way I have found to quickly, easily, and comprehensively communicate with my team: share rough concept sketches, which is quick and time-saving.

Not only does this help me articulate how I plan to tackle certain scenarios, but thinking out loud on paper, allows everyone—myself, the cross-functional team to see how ideas begin, evolve, and finally crystalize into the solution we've been working on.

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Concept sketches

Rough sketches were created while discovering new ideas, I could use my imagination at the most to put my creativity to action.

Later when I introduced all of these sketches, collaboratively we discussed the feasibility of the framework, development time and effort etc. involved and can identify the best out of rest.

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Critical thinking and concept sketches

As most of the elements are fixed and now we have a fair idea of how the rule builder may look like catering all the possible requirements that is there from the user side.
Now further discussion was needed on the functional requirements on deletion.
The order get changed when there is deletion of any row from a set of condition.

Created the concept screens to give a clear picture on how it might affect the order also, to initiate a discussion on the feasibility.

It also helped to get the attention of the stakeholders and cross functional team on what could be the possible experiences from user's perspective.

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Critical thinking on risk factors

This is prepared utilising the critical thinking process where I have created long list of questions of a particular “Deletion” state.

Where I have drill down into the row deletion and the limitations related to that.
These are vital points which needs attention from the stakeholder and cross functional teams to discuss. These points needs business approvals as to determine what are the restrictions to cater a rule builder.

Still it is in discussion from business side and the work is on little slower as the rule builder must have a business justification on the limitations of row deletion to proceed for further steps.

Mitigating risk

What if, user want to delete all 4rows of condition in condition set1? (Suppose there are 3 such sets in the condition pane.)

User can delete 4 rows and again start creating inside set1.

1. Why user delete all the conditions when he can edit each one? - Restrict delete, push for edit.

2. Why user delete 1condition among 4? - business requirement / by mistake.

3. Is there any undo action there if user want to retain the deleted rule if it is by mistake? - No

3. If alert while deleting is preventive or annoying? - It will be preventive as the deletion impact by mistake is huge and hence the alert will help users recognize, diagnose, and recover from errors, other side it will push the user not to delete rather edit.

What if all the 4 or more rows of condition which needs edit and user find it difficult to erase all the editable fields data first and then fill with new. So to overcome this situation user decide to delete all conditions inside the set?

In that case user may find the alerts preventive, as user can see the suggestion inside alert for deleting the condition set incase he needs to delete all the rows.

Hence user is guided well to delete the set and create a new condition set with new rows of condition.

What if there is only one set, are we allowing user to delete?

When only one set of condition and user allowed to delete, then there be no initiator to create a set again.

When there is more than one condition set user have flexibility to delete any one of the sets.

If there is one set with rows of condition and he needs to delete the set then he will click on "add condition set" to initiate another set and then can delete the previous.

How would user know that he needs to add another set to delete the existing set?

In alert if we can accomodate the detail deletion content.

Alternative, these informations can be present as "infotip".

If the condition-action-errormsg is interdependent?

Yes, user have to define the conditions first and based on that action and error message can be defined.

Incase there are many condition sets defined, rows of conditions within it, then user need to scroll down to get to the next Action pane.

What if user created 8 sets of condition and now wants to define the actions and the long scroll is bothering him?

User can collapse the Define condition pane, to eliminate the long scroll.

User can focus more into one pane when many sets are defined inside.

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Ideate and Design

Flexible and Stay Focused

With a better approach to building the rule logic by accessing the information right on the rules view without having to jump into other tabs constantly.

Users can have combinations of rule attributes which makes the user's task easy and flexible to create a rule that is based on multiple condition sets paring with different conditions defining them with logical operators and actions. If these conditional statements fail, the user can set the error message that can only get executed on failed circumstances.

Ideate and Design

As **space matters** and to make the screen less cluttered, the solution is designed very sleek and lightweight yet with multiple options to play around in a delightful way.

Usability test

So, once a solution is ready to get into the development phase, I wanted to validate the solution from the real users. My PM was happy and helped me on getting the real user's details. We conducted the usability test with 3 real users where the users were asked to create a conditional rule with different use cases provided by my PM, and I was observing where the user might encounter problems or experience confusion.

When they finished their tasks, I asked a few questions to understand if anything that is missed or needed to be accommodated or enhanced in the design. They were able to finish the task with no help and was happy with the provided solution.

UT questions and feedbacks -

Do you think the solution has captured all your task related inputs, if not can you please share what is your expectation? Yes, this is good, I could get a lot of combinations for the field names and values, which is really a cool feature.

Is there anything that you find need improvement, or any suggestion that you want to provide? Nothing as such, looks good to me.

Is there any more mathematical expression that need to be added? There is already a lot of options which I do not even know if that is needed or not, for now I can say few are useful, and others might be helpful in certain scenarios.

How satisfied are you with the available solution? It looks great.

Do you think the LHS and RHS may confuse a user? - No, not at all, we know all these terms.

Any feedback on the tooltip for LHS and RHS to help a new user? - No, I do not think it is needed, anyone who is performing these actions might be aware of these terms.

Request for redesign of the import screens from the product manager

Being an advocate of my user I always try to identify if there is any major pitfall present and later which can be possible pain points for the users.

Validating with usability testing is the best and easiest way to find such pitfalls that comes direct from users.

But unfortunately, most of the time there are issues with the availability of users and time, a crucial factor that is a major constraint for productivity that can not wait for any single reason.

So heuristic analysis was the last option to evident the existing pitfalls and make the product manager aware of the future escalations.

Heuristic evaluation of Import screens with existing and proposed new design

Ruleset-Import - Heuristic analysis

Existing Solution

AS per OpenText Design guideline, the usability severity levels that matches are -

CRITICAL - Obstructs task completion: user unable or likely unable to figure out how to complete a common or crucial task, or very likely to make important errors.
Damages reputation: an immediate and noticeable negative impact on OpenText reputation.

MAJOR - Causes significant delay, effort, and frustration: user able to complete the task, but with considerable degradation of user performance time and/or accuracy.

Problem description - 1. For primary UI elements, there are obvious alignment issues, obvious inconsistencies with visual presentation; or, numerous minor cosmetic issues resulting in an unprofessional or sloppy appearance.
2. Layout inconsistency causing significant disorientation.
Excessive keystrokes for the type of task (e.g., multiple confirmation dialogs, inefficient navigation hierarchy, etc.)Labels and/or tooltips are missing such that user cannot understand its function
A common menu item or toolbar button does not do what is normally expected.

1 Screen Flow - *Landing*

Proposed New Solution

1 ***Grouping helps user to focus more thereby eleminating cognitive load.***

- ***Preventive messages is a careful design which prevents a problem from occurring in the first place.***

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Heuristic evaluation of Import screens with existing and proposed new design

Existing Solution

2 Screen Flow - *Retrieve details*

Import rulesets

Note: if no customer is chosen the rule sets will be available to all customers

Search by: Select

Value: type to see suggestions

Retrieve details

Company name	Business unit ID	
INALFA ROOF SYSTEMS, INC. SOURCE OF SUPPLY	DE129273398-SND-BMW-A1-ZUG-NS	Select
FAURECIA ANGELL-DEMMEL GMBH	DE129273398-SND-BMW-A1-ZUG-NS	Select

Import | Cancel

Proposed New Solution

2 • *Grouping helps user to focus more thereby eleminating cognitive load.*

Import rulesets

You can only import JSON files for that were exported from this application

If no customer is choosen the rulesets will be available for all the customers

Search by: Business unique ID

Value: DE

Retrieve details

Company name	Business unit ID	
Lorem ipsum dola malorar	DE-129273398-BMW-A1-ZUG-NS	Select
Lorem ipsum dola malorar	DE-129273398-BMW-A1-ZUG-NS	Select
Lorem ipsum dola malorar	DE-129273398-BMW-A1-ZUG-NS	Select

3 items | 10 per page | 1

Choose file

Select

Import | Cancel

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Heuristic evaluation of Import screens with existing and proposed new design

Heuristic evaluation of Import screens with existing and proposed new design

Heuristic evaluation of Import screens with existing and proposed new design

Existing Solution

4 Screen Flow - *Status*

Import rulesets

Import operation completed. Please find the summary below:

Trigger name	Status
Test trigger für Deutschland	Imported
Test trigger para españa	Imported
ABC124	BUID does not exist

Close

Proposed New Solution

- *Use of proper text color to maintain consistecy and to avoid confusion.*
- *Addition of visual elements help user to scan fast.*

4

Import rulesets

Import operation completed. Please find the summary below:

Ruleset name	Status
Lorem ipsum dola malorar	Imported
Lorem ipsum dola malorar	Imported
Lorem ipsum dola malorar	Imported
Lorem ipsum dola malorar	BUID does not exist.

Ok

Showcase

Active Invoices with Compliance

opentext™ | Active Invoices with Compliance

About

- Active Invoices with Compliance provides clients with a global solution for electronic invoicing.

Requirements

- User wants to hold all the invoices for legal audits beyond the retention expiry date and when the legal audit is done they also want to release the invoices.
- User wants single per page select or bulk select across pages and perform hold or release the electronic invoices.
- When the legal hold action or legal hold release is done in bulk or single user must get the status to identify.
- As these invoices once released that means it will be deleted from the archive once the retention expiry date is reached, hence there should be confirmation before they get released with valid reason.
- As these invoices once on-hold that means it will prevent the deletion from the archive once the retention expiry date is reached, hence there should be confirmation before they placed on hold with valid reason.
- The bulk hold or release take time, user need to be informed of that status to avoid confusion.
- The user should be notified once user task is done.
- User need the flexibility to get into the respective invoice pages.
- User wants to see the history of the released and on-hold records.

Users - Warner brothers and ExxonMobil

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Solutions

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Solutions

Some written applauds that ignites my passion towards problem solving

"I did want to take a moment and say thank you to the team. You all did a fantastic job with Sprint 15!! The stakeholder demo went very well and I think everyone was impressed with the amount of progress that has been made so far. I am thrilled with the progress!

Keep up the great work! This project is delivering such value to our company and is a key initiative to help transform how we support our brand partners. "

Karen (Lowe) Ashbrook
Director, Digital Capabilities | Marketing Products & Capabilities
Alliance Data Card Services

"Ritu- This is great work"

Tanveer, Saad
POI Provision, RET

"Conderimg these efforts and going forward in the implementation phase."

Mochi, Venugopal
Project Manager, EAS Salesforce

"Very impressed with the UX side of the team and feel that we're all working together in a unified way."

Lelchitsky, Allen
Director - CRM, EAS Salesforce PMG

"Agreed.. Kudos to the UX team"

Bose, Indraneel
Engagement Lead, Cognizant Infra Services

Thank You

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