

Balcão Único Digital da Universidade de Aveiro

Final Presentation
Human-Computer Interaction

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P3
Computer and Informatics Engineering
28/05/2024



universidade
de aveiro

What is BUD?

- STIC are responsible for managing communications services and systems in UA;
- BUD stands for Balcão Único Digital. Is a platform that centralizes all services related to STIC serving as the primary point of contact;
- Allows the user to request services and to report incidents such as service degradation or unavailability;
- It is aimed for all students and administrative employees of UA.



Motivation

Relevance

Only way of communication with STIC.
Deals with all technological related issues
and requests

Current systems have flaws

The systems in place have problems related
to usability, accessibility and user feedback.

User Experience

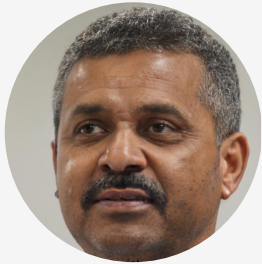
Personal Experience
Community Feedback



Personas

our target audience

Personas



Kushwaha Chopra

Age: 42

Gender: Male

Job title: Ph.D. in Electrical Engineering from the Indian Institute of Technology (IIT), Mumbai. Electrical Engineering professor at the University of Aveiro.

Background: Passionate about teaching Electrical Engineering. Fluent in Hindi and English.

Goals and Motivation:

- Share his knowledge in Digital Electronics
- Provide tools and resources about Digital Electronics to Students.

Needs:

- Access to a platform that allows to create and share learning materials, provide feedback and communicate with students.
- Physical Internet Connection on his cabinet for meetings and resources upload.



Emídio Costa

Age: 52

Gender: Male

Job title: Specialist in Systems and Information Technologies. STIC employee at UA.

Background: Experience in Excel and Resource management.

Goals and Motivation:

- Deal with user requests
- Manage IT resources of UA

Needs:

- Accessible and organized system to deal with community problems and requests.
- Update and manage requests from the UA's community.



Requirements

functional and non functional

Functional Requirements

Priority	Requirements
High	Ticket creation
	View ticket details
	Update ticket status
Medium	Filtering system for tickets
	Language selector*
Low	User authentication*
	Instant messaging**

* incomplete implementation

**not feasible to implement

Non Functional Requirements

Requirements
Available 24/7
Simple interface with an easy navigation
Compatible with all browsers and devices
Be prepared for peaks in affluence
Provide feedback to the user
Secure storage of data
Accessible to users with disabilities



“Paper” Prototype

prototype, tasks, tests and results



https://bud-ev.ua.pt

BUD

BUD

pesquisar artigos



MEUS TICKETS



NOVO TICKET



PT

Reparações



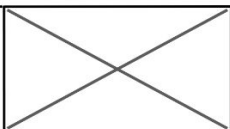
Um texto genérico sobre a natureza das reparações que podem ser feitas nesta plataforma.



Artigos de Ajuda Populares

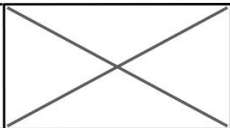
Título de um artigo

Um texto descritivo sobre o ambito deste artigo de ajuda.

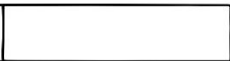


Título de um artigo

Um texto descritivo sobre o ambito deste artigo de ajuda.



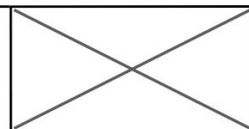
Título de um artigo



Últimas Novidades

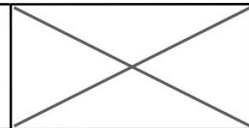
Título de um artigo

Um texto descritivo sobre o ambito deste artigo de ajuda.



Título de um artigo

Um texto descritivo sobre o ambito deste artigo de ajuda.



[Ler mais novidades →](#)



BUD

search articles

MY TICKETS

+ NEW TICKET



EN

New Ticket

1

Service

2

Category

3

Details

Correio Eletrónico

Correio eletrónico institucional, mailing lists, lista de contactos, calendário.



Alojamento Web

Plataforma de alojamento de conteúdos web para projetos, parcerias, UCs e páginas pessoais.



Audiovisuais

Instalação de equipamentos, gestão da plataforma Educast e apoio à realização de produções audiovisuais.



E-Learning

Gerir áreas e utilizadores da plataforma de apoio à aprendizagem orientada para o ensino à distância.



Inquéritos Online

Serviço para criar formulários e inquéritos para recolha de dados no âmbito de projetos.



Redes de Comunicações

Serviço de comunicações de dados departamental, acesso à internet, através de rede cablada e wireless.



Gestão de Utilizadores

Gestão da identidade eletrónica dos utilizadores da comunidade académica: dados pessoais.



Helpdesk

Suporte técnico para apoio presencial ou através de video-chamada.



Reportar Incidentes

Solicitar assistência para um problema de segurança, desempenho ou



> NEXT

@stic@ua.pt



https://bud-evua.pt/my-tickets

BUD



BUD

pesquisar artigos

Gerir Tickets

+ NOVO TICKET



PT

< BACK

Ticket ID:3

Assunto: Creation of a Course Page

Data: 09/04/2024

Prioridade: 3 **Requisitante:** Kushwaha Chopra **Estado:** Completo

Nome da Área: "Introduction to Digital Systems"

Responsável: "Kushwaha Chopra"

Âmbito de utilização: "To communicate with the students and provide materials, dedicated course page on e-learning."

Unidade curricular: Sim

Observações:

Anexos:

Responsável: Emídio Costa

Assign to myself

Update

Assunto: Creation of a Course Page
Data: 09/04/2024
Prioridade: 3
Requisitante: Kushwaha Chopra
Estado: Completo

Assunto: Creation of a Course Page
Data: 09/04/2024
Prioridade: 3
Requisitante: Kushwaha Chopra
Estado: Completo

Enviar mensagem...



Tasks Given

- 1 Request Physical Internet Connection for you on the room '4.2.23' and socket "2.4".
- 2 Changing the language to english, request Creation of an Area in Moodle for the 'Introduction to Digital Systems' and Area Administrator "Kushawha Chopra".
- 3 As Admin delegate access to "GLUA@ua.pt" project email account to "Miguel Vila (miguelovila@ua.pt)".
- 4 As Admin update ticket status of ticket with the Subject "Request Physical Internet connection" by "Kushwaha Chopra" to "In Progress" and its priority to "2 - Medium".



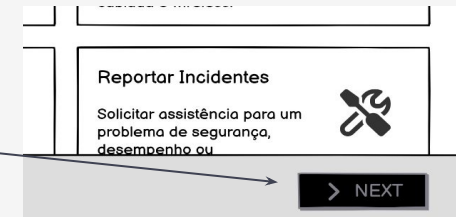
Tasks Results

Task	User 1	User 2	User 3	User 4	User5	User 6	User 7	User 8	Median
1	5	4	3	4	3	5	3	4	4
2	5	5	5	5	5	5	4	5	5
3	5	5	5	5	5	5	5	5	5
4	4	4	5	5	4	5	4	5	4.5

1 - Very hard 2 - Hard 3 - Medium 4 - Easy 5 - Very easy

Users were all UA students

Some users user did not find having a next button when creating a ticket intuitive





Functional Prototype

tasks, tests and results

Tasks Given

- 1 Request Physical Internet Connection for you on the room '4.2.23' and socket "2.4" with priority set to "3 - Low"
- 2 Changing the language to english, request Creation of an Area in Moodle for the 'Introduction to Digital Systems' and Area Administrator "Kushawha Chopra".
- 3 As Admin delegate access to "GLUA@ua.pt" project email account to "Miguel Vila (miguelovila@ua.pt)".
- 4 As Admin update ticket status of ticket submitted on day 17/05/2024



Tasks Results

Task	User 1	User 2	User 3	User 4	User5	User 6	Median
1	5	4	4	5	5	5	5
2	5	5	5	5	5	5	5
3	5	5	5	4	4	5	5
4	4	4	3	4	3	3	3.5

1 - Very hard 2 - Hard 3 - Medium 4 - Easy 5 - Very easy

Some users confused the "Email" service with "User Management";

Many users found it difficult to search for a specific data given that there wasn't any filtering system put in place.

Users were all UA students

	26/05/2024, 18:24:19	Yesterday
m	26/05/2024, 22:55:31	Yesterday
	17/05/2024, 22:56:12	10 days ago

SUS Scores

Users	Scores	Mean	Median
User 1	90	90.00	91.25
User 2	92.5		
User 3	82.5		
User 4	100		
User 5	80		
User 6	95		

Grade	A
-------	---

Calculated with <https://stuart-cunningham.github.io/sus/>

Post Task Questionnaire

Instructions: Thank you for your cooperation with this study, which aims to evaluate the User Interface of the application/system and, try to improve it following the Usability criteria. Your collaboration is important for the success of this evaluation, so we ask you to complete this questionnaire, the data of which will be used in total anonymity for scientific purposes only.

1. Demographic data

User number: _____
(check the correct options)

Gender: ☐ Female ☐ Male Age: _____ Profession: _____

Previous experience with this type of application/system: ☐ None ☐ Some ☐ A lot

Observations (fill in any relevant facts for this test, e.g. vision, handedness): _____

2. Overall opinion on the application/system (SUS)

After using the application/system and taking into account your final assessment, check the circle that best reflects your opinion regarding its usage. If you believe that these quantifications are not applicable, write your opinion in the space provided.

I think that I would like to use this system frequently. Totally agree ○○○○ Totally disagree ○○○○

I found the system unnecessarily complex. Totally agree ○○○○ Totally disagree ○○○○

I thought the system was easy to use. Totally agree ○○○○ Totally disagree ○○○○

I think that I would need the support of a technical person to be able to use this system. Totally agree ○○○○ Totally disagree ○○○○

I found the various functions in this system were well integrated. Totally agree ○○○○ Totally disagree ○○○○

I thought there was too much inconsistency in this system. Totally agree ○○○○ Totally disagree ○○○○

I would imagine that most people would learn to use this system very quickly. Totally agree ○○○○ Totally disagree ○○○○

I found the system very cumbersome to use. Totally agree ○○○○ Totally disagree ○○○○

I felt very confident using the system. Totally agree ○○○○ Totally disagree ○○○○

I needed to learn a lot of things before I could get going with this system. Totally agree ○○○○ Totally disagree ○○○○

Please leave any comments about the user experience provided by the application/system in the space provided below.



Heuristic Evaluation

evaluating the functional prototype

Issue 1 - No Feedback on Ticket Submit

Heuristic

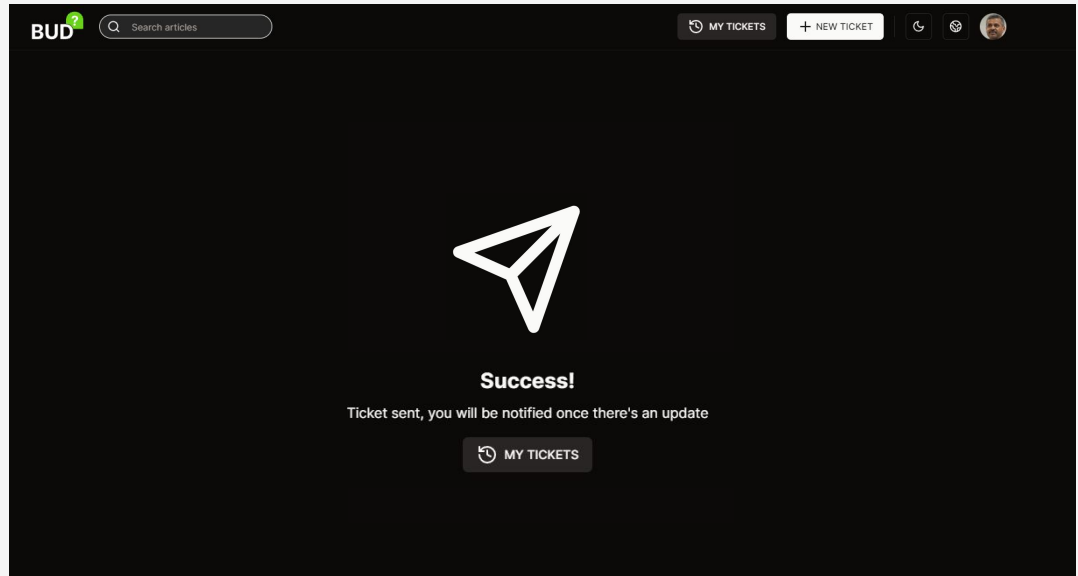
Visibility of System Status

Description

No feedback on successful ticket submitting

Severity

1



Issue 2 - Empty Tickets

Heuristic

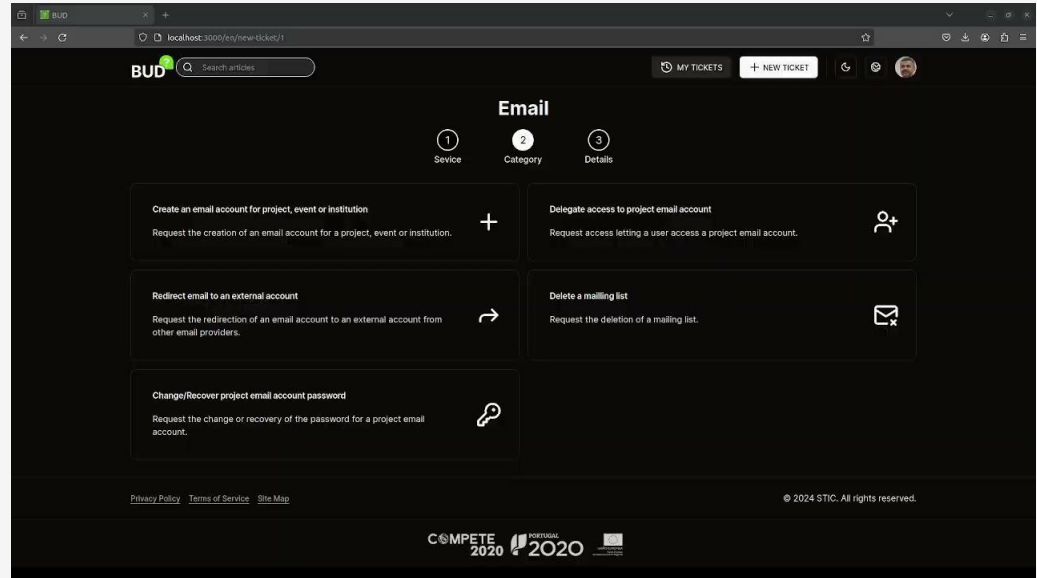
Consistency and Standards

Description

Users can submit empty tickets without any warning

Severity

4



Issue 3- Ticket Filtering

Heuristic

Flexibility and efficiency of use

Description

Tickets are displayed without options to filter or order them

Severity

2

BUD

Q

Search articles

🕒


MY TICKETS

+

NEW TICKET

🔄

🌐



My Tickets

Subject	Priority ↑↓	Date ↑↓	Requester		Status	Last message
HelpDesk	1 - High	04/05/24	Kushwaha Chopra	Emidio Costa	In Progress	10 days ago
Incident Report	1 - High	09/05/24	Kushwaha Chopra	Emidio Costa	In Progress	5 days ago
Delegate project email account		5/21/2024	Kushwaha Chopra	Emidio Costa	Open	Today
Delegate project email account		5/21/2024	Kushwaha Chopra	Emidio Costa	Open	Today
Delegate project email account		5/21/2024	Kushwaha Chopra	Emidio Costa	Open	Today
Delegate project email account		5/21/2024	Kushwaha Chopra	Emidio Costa	Open	Today

Issue 4- No Feedback on Ticket Update

Heuristic

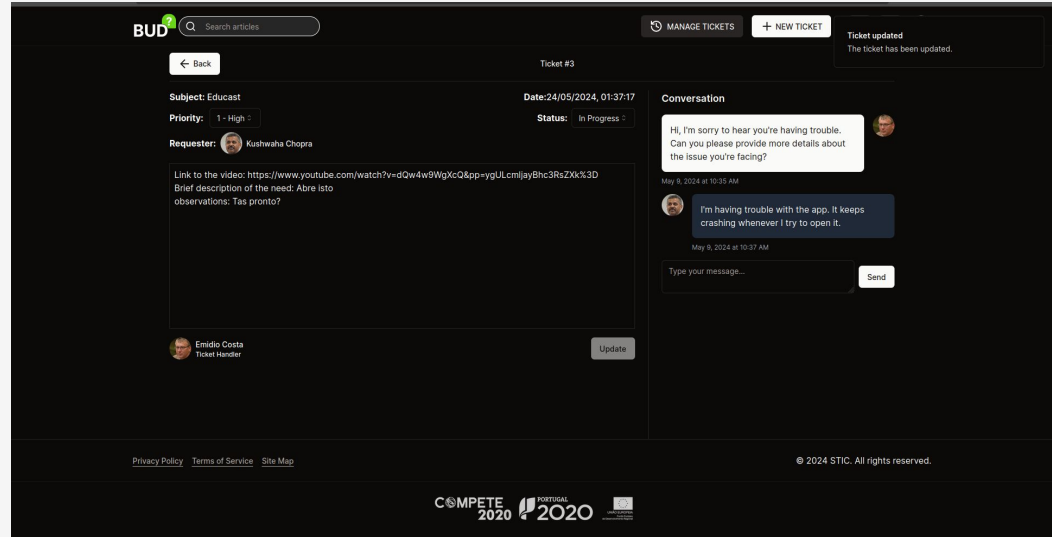
Visibility of System Status

Description

The system did not provide feedback after changing the priority or status

Severity

1



Summary Heuristic Evaluation

	Martim Carvalho	Miguel Vila	Miguel Reis	Median
1. Empty Tickets	3	4	4	4
2. No Feedback on Ticket Submit	2	1	1	1
3. Ticket Filtering	2	3	2	2
4. No Feedback on Ticket Update	1	1	2	1

0 - I don't agree that this is a problem at all **1** - Cosmetic Problem **2** - Minor Usability Problem

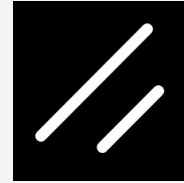
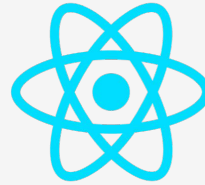
3 - Major Usability Problem **4** -Usability Catastrophe

All issues were solved in the final delivery

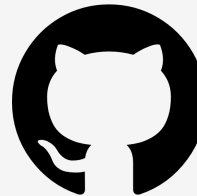
Demo



Technologies:



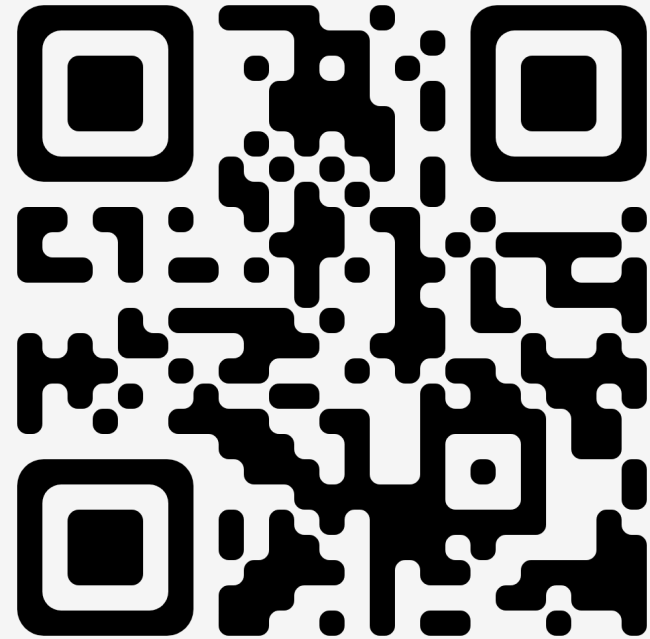
Tools:



Demo

Check it out at:

<https://bud.miguelovila.com/>





Future Work

the missing pieces

Future Work

- Complete the **translation system**
- Integrate the **login with UA's identity provider**
- Implement a **notification system**
- Implement **instant messaging**
- Implement a **rating** mechanism for when a ticket is closed
- Create a **statistics page** for STIC employees

Individual Contribution

a moment for self-reflection

Martim Carvalho

20%

Miguel Reis

40%

Miguel Vila

40%

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