Best serve the **User eXperience**

A few usability principles and their Eclipse rendering

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- BONITASOFT, ECLIPSE, AND I
- USERS, R&D, AND I
- UX AND USABILITY PRINCIPLES
  - USER EXPERIENCE
  - DAVE
  - USABILITY PRINCIPLES
- USABILITY PRINCIPLES – DETAILS
- CREATE GOOD UX
Bonitasoft, Eclipse, and I

• Open source, BPM, any vertical
• Automate processes, connect with the IS
• Efficiency, security, traceability, flexibility

=> A generic product that needs a good UX
Bonitasoft, Eclipse, and I

Bonita BPM Studio & UI Designer

Form application

Bonita BPM Portal

Living Applications
Bonitasoft, Eclipse, and I
Bonitasoft, Eclipse, and I

- Bonita BPM Studio
- RCP application
- Built on Eclipse 4.4
Bonitasoft, Eclipse, and I

Main components

Welcome page
"Coolbar"
Process designer
Custom wizards
Bonitasoft, Eclipse, and I

⚠️ Product started in 2009, I onboarded in 2013

⚠️ Cognitive psychology background

⚠️ 10 years as a consultant

⚠️ Only know the studio UI but no eclipse

👍 UX methods apply whatever the technology
Users
R&D & I
Users, R&D, and I

Users

Java application developers on Eclipse
Users, R&D, and I

Java application developers on Eclipse
Users, R&D, and I

POINT OF VIEW

CONTEXT
Users, R&D, and I

USABILITY
UX and Usability Principles
UX and usability principles

• **UX** = make your
  • **U**sers
  • **S**ucceed
  • **A**void and recover from error
  • **B**e efficient
  • **L**earn
  • **E**njoy

• From the **scope** of a feature
to the **very details** of the UI
Users, R&D, and I

Your user requirements include four hundred features.

Do you realize that no human would be able to use a product with that level of complexity?

Good point. I'd better add "easy to use" to the list.
UX and usability principles

UX = User-Centered Design (UCD)

But

WHO - WHAT is the USER?
UX and usability principles

Creating UX = Solving the equation

Cognitive similarities  x  Context-specific use-cases
Cognitive similarities: A Brain is a Brain
A Brain is a Brain

• From task to goal
E.g.: Customer Support team

GOAL
Expand
Please customers

SUB-GOAL
Answer tickets relevantly and on time

TASK
Pick a ticket from a sorted list
A Brain is a Brain

- Human-Machine interaction

Inspired from: Albert Ellis
Context-specific use-cases: Every situation is unique
Every situation is unique

A user has A role, in A company, at A given time
+ a unique skill set, history, personal life events, emotions, and more
Every situation is unique

Parameters
- Physical state
- Mental state
- Gender
- Skills
- Seniority

Impacts
- Health
- Security
- Skills
- Satisfaction

Prescription
- Materials
- Machines
- Social relationships
- Organization
- Work time
- Work space

Activity

Impacts
- Production
- Quality
- Robustness

Impacts
- Parameters

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UX = Solving the equation

... here comes “Dave”
Solving the equation

• Dave is a personum.

• He is our Java Application DEVeloper
Solving the equation

• Create persona:
  – Define a **scope** worth learning about:
    • Responsibilities in the project
    • Goals
    • Technical skills & environments
    • Usage habits, common references
    • Likes, don’t likes
    • Geographies
Solving the equation

– Apply **methods** to learn about the scope:

- Surveys
- Observations
- Interviews
- Market listeners

– Learn about specific use-cases as you go
– Keep it dynamic: skills evolve, contexts evolve…
Solving the equation

• Apply knowledge: **Persona**

Sam (System Admin)

Fred (Front-end Developer)

Anna (Business Analyst)

Andy (End-User)

Dave (Java Application Developer)
Solving the equation

• Dave’s **scope**:  
  – Geography  
    • USA, France, LATAM, Spain, Italy, Brasil, Germany  
  – Responsibility in the project  
    • Main developer, interfacing with Anna, Sam, and Andy  
  – Technical skills / environment  
    • Java, Groovy, Eclipse, BPMN(?)  
  – Habits and common references  
    • Eg.: ctrl+space for auto-suggestion  
  – Likes, don’t likes  
    • Eg.: Changing specs, lack of versioning, slow tools  
  – Goals  
    • Create slick code, deliver on time (make Andy happy)
Solving the equation

• Do it
Solving the equation

• Create **empathy** for the users
• Enforce a **process**
  – New feature
  – Improvement
Usability principles - Details
Capture, guide
Information structure, incitation

- Organize the content
- Give it a visual hierarchy
- Create space around what’s important
- Use colors and images

- Menu / Properties / Palette
- Tree
- BDM manager
- Top menu
Information structure, incitation

- Good: BDM manager
Information structure, incitation

- Good: Insert Data and Development menus from the Welcome page
Help

- Name the models used as references
- Explain the concepts, the paradigm
- Describe or lead through a basic workflow
- Explain useful tips and tricks
- Warn against pitfalls
- Open to more information

- Contextual help
- “i”
- Links to web
- Documentation
- Tutorials
**Help**

- **Good**: Contextual help and tooltips

![Screenshot of the interface showing the Help section.](image)

It can be hidden

![Screenshot of the interface showing the Hidden option.](image)
Help

• Good: Links to documentation, tutorials, process examples
Help

• Name the models used as references
• Explain the concepts, the paradigm
• Describe or lead through a basic workflow
• Explain useful tips and tricks
• Warn against pitfalls
• Open to more information

- Contextual help
- “i”
- Links to web
- Documentation
- Tutorials
- Pop up guidance
- Question marks
(video 1:09:07)
Help

- Improve: Make better use of guiding space in pop ups
Ease the right choice
Minimize workload

• Minimum memory calls
• Recognition rather than recall
• Offer the right options
• Clarify labels of choices

- Lists
- Expression editor
- Ctrl+space
- Dropdown
- Checkbox vs radio buttons
Minimize workload

- Good: Expression editor has plenty of lists
Minimize workload

- Good: Radio buttons give a clearer explanation of the options
Minimize workload

- Improve: Visibility of the provided lists
Make the controls obvious
Graphical parameters

- Location
- Size
- Colors
- Fitt’s law: closer and bigger targets are accessed faster

- The whole checkbox line clickable
- Buttons for tables
- Expression editor
- List of options
- Question marks
Graphical parameters

- Improve: Location of buttons
Give the power to the user
User control and freedom

• Give flexibility
• Give various means to do a task
• Consider the phase of a project
• Adapt to levels of expertise

- Preferences
- Environments
- Contextual palette
- Shortcuts on create variables
- Default names
User control and freedom

- Good: Preferences wizard
User control and freedom

• Good: contextual palette, shortcuts to create data
User control and freedom

- Flexibility
- Variability
- Time of the project
- Expertise: shortcuts
- No kidnapping

- Preferences
- Environments
- Contextual palette
- Shortcuts on create variables
- Default names

- Cancel is unavailable
- Welcome page is forced on each start
Guide on what needs to be input
Guidance on format

- Tooltips
- Placeholders
- Hints
Success or error: tell them
Visibility on the system status, feedback, waiting time, error management

- Validation progress bar
- Error messages in properties
- Default names
- Random progress bars
- Live validation problems over the workspace
Visibility on the system status, feedback, waiting time, error management

- Good: Default names to avoid unstable status

- Good: Instant error detection
Use standards and consistency
Consistency & standards

- Eclipse pop ups and wizards
- Same UIs for similar uses

- Titles
- Button position
- Ctrl+space
- Labels
Consistency & Standards

• Improve (?): Default labels sometimes tricky
Usability principles - Details

• Summary

  – User guidance, information structure, incitation
  – Help
  – Minimal workload, concision, low density
  – Consistency & standards
  – Visibility on the system status, feedback, waiting time
  – User control and freedom
  – Flexibility, variability intra-individual
  – Avoid errors and help error recovery, manage delete
Usability principles - Details

• Sources:
    => http://www.ergoweb.ca/criteres.html
  
    => http://www.nngroup.com/articles/ten-usability-heuristics/
  
  – ISO 9241-110
    => http://www.userfocus.co.uk/resources/iso9241/part110.html
Create Good UX

• **UX** = make your
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• **UX** = **User-Centered Design** (**UCD**)
Create Good UX

• Meet your users
• Create persona
• Build empathy
• Design for the persona
• Apply principles
• Check on the field
Thank you, heroes.
Evaluate the sessions at www.eclipsecon.org +1 0 -1
Meet your users

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