
 Constantine & Lockwood, Ltd. 12/12/94-1/15/99

**EuCase: Essential use Case
MODELING TOOL**

**Prototype Version 0.99 by
Larry L. Constantine and Lucy A. D. Lockwood**

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**INSTRUCTIONS
NEXT PAGE** 

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Constantine & Lockwood, Ltd., provides consulting and training in essential use case modeling and other aspects of software usability as well as high-performance teamwork and the strategic management of technology transition and diffusion in organizations. For more information contact us by telephone, fax, or email.

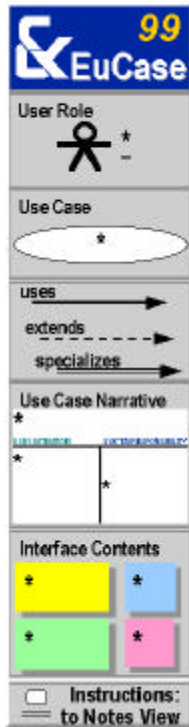
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General Instructions: See Notes View, Slide # 2.

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Essential Use Cases Modeling Tool Prototype

#2

This PowerPoint file was developed as a prototype instructional tool for teaching essential use case modeling. Because we have received so many requests, we offer it “as-is” for experimental use. If you pass it on to others, please be sure to copy the entire file, including all instructions. For further information, please get a copy of *Software for Use: A Practical Guide to the Models and Methods of Usage-Centered Design* (Addison-Wesley, 1999) or consult the paper “What Do Users Want?” by Larry L. Constantine (*Windows Tech Journal* 4 (12): 30-39, December 1995), available from Constantine & Lockwood, Ltd. (www.foruse.com).

Read Instructions in Notes View First

- ➔ For instructions in using this file, switch to View | Notes Pages. General instructions on Slide #2. Specific instructions on User Role Models, Use Case Narratives, Use Case Maps, and Content Models are found in the Notes Pages for the corresponding slide; just switch to Notes View for instructions at any time.
- ➔ Print this file (all slides, not hidden slides) as Notes Pages for a complete paper copy of all instructions.

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General Instructions

- ➔ Open file as Read Only and then File | Save As under new name.
- ➔ Set window to full screen, Slide View, Zoom to 75% (or to fit full slide plus “TOOLBAR” at left onto screen).
- ➔ Copy icons from “TOOLBAR” at left to blank drawing space.
[To copy: select, then Ctrl+D; or Ctrl+drag-and-drop]
- ➔ Double click on the * in the copied icon to type title or text. NOTE: User Role, Use Case Narrative, and Interface Contents have separate titles at top and text area below. Reposition cursor with mouse or cursor keys to text area for proper formatting.

E.g.

Title Here

description here

- ➔ Position and resize icons as desired.
- ➔ Move to new page as needed. Duplicate pages in Slide Sorter View as needed. (Master copies can be found at end of file.)

General Instructions: See Notes View, Slide # 2.

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Sample User Role Model

- ⊗ GeneralTypist
occasionally insert 1 character from small symbol set
- ⊗ MultinationalTypist
frequently, quickly insert 1-N characters;
memorized keystrokes but need reminding
- ⊗ ProgrammerCoder
code conversion: ASCII, hex, DOS8, extended keyboard

➔ To use

- ➔ Copy User Role icon from “TOOLBAR” at left of “slide” to blank drawing space.
[To copy: select, then **Ctrl+D**; or **Ctrl+drag-and-drop**]
- ➔ Resize and position as desired.
- ➔ Double-click on * on top right and type title; move to or click on line below to type descriptive characteristics.
- The **user role model** is a list of roles that users can play in relationship to a system.
- A user role is a relationship to a system played by some one or more users. User roles are called also called actors (Jacobson)
- A user role is an abstraction from the characteristics of actual users, a collection of common interests, behaviors, expectations, and responsibilities.
- Roles can change in character over time, as when users progress in experience and ability in using a system.
- A user role is represented by a simple name and a brief description of salient characteristics of that role.
- Any number of actual users may function in a given role. Conversely, any one user may act in any number of user roles.
- The purpose of the user role model is to facilitate identification of essential use cases.

General Instructions: See Notes View, Slide # 2.

Sample Essential Use Case

UsingAutoTeller

USER INTENTION

SYSTEM RESPONSIBILITY

identify self

verify identity
offer choices

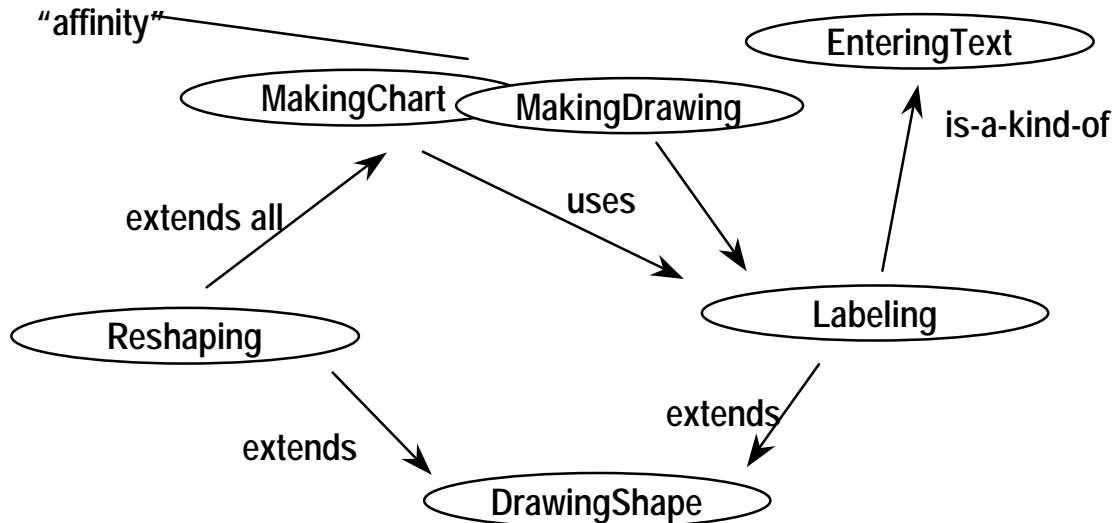
choose

perform chosen
service

- ➔ **To use**
- ➔ Copy Use Case Narrative icon from “TOOLBAR” at left to blank drawing space. [To copy: select, then **Ctrl+D**; or **Ctrl+drag-and-drop**]
- ➔ Resize and position as desired.
- ➔ Double-click on * at top and type title; double click on * at left and right under **USER INTENTION** and **SYSTEM RESPONSIBILITY** to type User Intentions and System Responsibilities.
- An **essential use case** is an abstract scenario for one use of a system that is meaningful, complete, and well-defined, from the perspective of one user role. It is based on what a user, in a role, is trying to accomplish, the purpose or intent, not the concrete procedures or detailed physical steps for carrying out that purpose.
- An essential use case takes the form of a structured narrative describing the sequence of abstract actions. It is modeled in two parts: a **User Intention Model**, showing the reason, purpose, or intent of actions initiated by the user, and a **System Responsibility Model**, showing the actions of the system in response to the user.
- Use cases are named using simple titles that suggest a specific on-going action with a specific object, for example, **findingCodeEquivalent** or **startingEngine**.
- Essential use cases are derived from an analysis of the needs, purposes, and intents of users in each of the identified user roles.
- Essential use cases are refined through abstraction, idealization, simplification, and generalization.

General Instructions: See Notes View, Slide # 2.

Sample Use Case Map



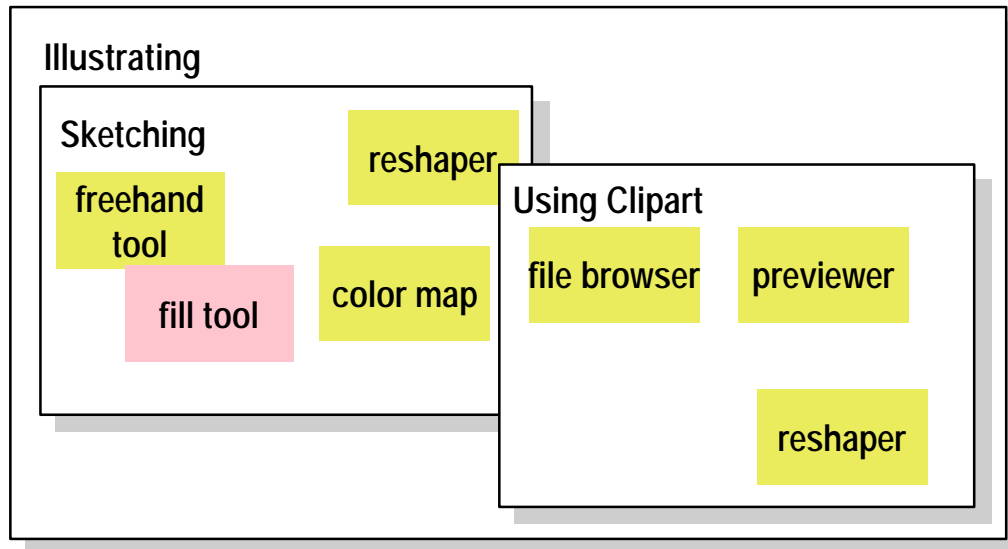
➔ To use

- ➔ Copy Use Case icon from “TOOLBAR” at left to blank drawing space.
[To copy: select, then **Ctrl+D**; or **Ctrl+drag-and-drop**]
- ➔ Resize and position as desired.
- ➔ Double-click on * in center and type title of Use Case.
- ➔ Copy arrows from “TOOLBAR” at left to blank drawing space.
Resize and position as desired. Label with text tool if desired.

- A complete **essential use case model** incorporates all essential use cases represented by ellipses with the name of the use case.
- Use cases may be interrelated by affinity, classification, extension, and subordination. Common or shared patterns of interaction can be represented as separate, interrelated use cases.
- An extension is a use case representing an alternate or exceptional course of interaction that may modify or extend another use case. The label “extends” is used for the extension relationship.
- Classification defines use cases as subtypes of other use cases. The label “is-a” is used to identify the classification relationship.
- Subordination represents one use case as a subprocess used by another. The label “uses” identifies subordinations in essential use case models.
- Affinity refers to any unspecified form of similarity or close relationship. Affinity can be represented by placing use cases relatively close or distant from each other without an arrow indicating a specific relationship, such as extension or classification.

General Instructions: See Notes View, Slide # 2.

Sample Content Model



➔ **To use**

➔ Copy any of the Interface Content icons from the “TOOLBAR” at left to blank drawing space.

[To copy: select, then **Ctrl+D**; or **Ctrl+drag-and-drop**]

➔ Resize and position as desired.

➔ Double-click on * at the top and type title or name; move cursor below to type brief description of the element.

➔ Use drawing tools to create outlines for Interaction Contexts as desired. (Shapes of Interface Contents can be changed using **Draw | Change AutoShape** on PowerPoint menu bar at top.)

● A **content model** is an abstract representation of a “working space” in a user interface, a collection of abstract elements representing capabilities and facilities--tools, materials, and working areas--to be offered by the user interface in support of one or more use cases. (An interaction context has been called a “work environment” by Holtzblatt and Beyer.)

● An interaction context represents the content of part of the user interface, not the physical layout or exact visual appearance. It is an initial design for a user interface composite, such as a window, pane, or dialogue box..

● User interface features are represented by abstract elements, identified in general terms that convey their functions, e.g., container or selector. Contents within an interaction context become visual features of the user interface, such as controls, menus, or entry fields

● Each interaction context can be modeled by a separate page or by a bounded region within a diagram.

General Instructions: See Notes View, Slide # 2.