UI/UI DESIGN – V1

AS PER CLAM LEVEL

Scenarios, concrete use cases, and essential use cases are examples of varied styles of modeling

and representation that have different relative advantages in different contexts. Usability

inspections and usability testing usually require fairly detailed or specific scenarios that will

exercise a variety of functions and expose a greater portion of the user interface to scrutiny.

Non-technical end-users often are most comfortable with the greater realism and specificity of

scenarios or concrete use cases. For software engineering and the design of internal software

architecture, however, the more traditional concrete use cases have proven particularly

effective. Essential use cases can be too abstract to guide many important programming and

program design decisions, and scenarios informally intermix multiple functions, features, and

threads of usage.

For user interface design, however, the abstraction of essential use cases is precisely the ticket,

allowing the designer to model the essential structure of tasks without hidden and premature

assumptions about user interface design details. We have long argued that abstraction

encourages creative innovation, and the recent experiences of several teams using essential use

cases have supported this argument with a string of new software patents.

**Language and structure in models**

Because language influences thought patterns, the style of writing, the format, the wording, and

even the grammatical form employed in use case narratives can all influence the value of use

cases for designing user interfaces. Of course, the same must be true for the design of software

architecture as well, but our concern here is with usability and user interface design more than

the other issues in object-oriented software engineering.

Given that really good user interface design is so difficult and real-world design problems are

often so complex, the designer needs every bit of cognitive leverage and perceptual help

attainable. Some styles of writing use cases facilitate good user interface design, while others

are either indifferent or even interfere with it.

The more central and direct the role of use cases in the user interface design process, the more

important becomes the issue of the form and style of representation. If, as in usage -centered

design, the use case model directly drives and informs the user interface design, then narrative

style and representation emerge as critically important.

EXAMPLE -

A cash withdrawal transaction is started from within a session when the

customer chooses cash withdrawal from the menu of possible transaction types.

The customer chooses a type of account to withdraw from (e.g., checking) from a

menu of possible accounts, and then chooses a dollar amount from a menu of

possible amounts. The system verifies that it has sufficient money on hand to

satisfy the request. If not, it reports a failure to the session, which initiates the

Failed Transaction Extension to report the proble m. If there is sufficient cash, it

sends the customer's card number, PIN, chosen account and amount to the bank,

which either approves or disapproves the transaction. If the transaction is

approved, the machine dispenses the correct amount of cash and issues a

receipt. If the transaction is disapproved due to an incorrect PIN, the Incorrect

PIN extension is executed. All other disapprovals are reported to the session,

which initiates the Failed Transaction Extension. The bank is notified whether or

not an approved transaction was completed in its entirety by the machine; if it is

completed then the bank completes debiting the customer's account for the

amount.

>>>The problems with this style of narrative are numerous. There is no clear separation between

the user side of the interchange and the system side. The narrative intermixes internal and

external requirements and jumps erratically between external and internal perspectives.

Elements that are essential to the nature of the problem (e.g., “the machine dispenses the

correct amount of cash”) are co-mingled with implicit decisions about the design of the user

interface (e.g., “customer… chooses a dollar amount from a menu of possible amounts”). The

lack of structure forces the reader to trace through the entire text just to get an idea of the

general nature of what is happening. Portions of the narrative that are important for the design

of the user interface are buried among descriptions that are irrelevant.