

Usability - the art of delivering what the buyer requires

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ABSTRACT

In this paper usability describes as the art of delivering what the buyer requires. It proposes that usability methods have a potential that is currently often neglected in the procurement of IT-systems; a common and exact understanding of how the buyer wants the functions workflow and design, before they are built. That turned out as a benefit for both the buying- and the selling organizations - and an argument for usability works that make sense for those who were in charge at the buying organisation.

Author Keywords

Vendors, communication, procuring, buyer, procurer, development.

INTRODUCTION

The thesis was carried out as a participating observer at an IT-systems vendor [D. Gunnarson]. The purpose was to find suitable prerequisites for usability development.

THE ART OF DELIVERING WHAT THE BUYER REQUIRES

People at the selling organisation often gave expression that they felt frustration about that even when they had fulfilled the specifications, the customer wasn't satisfied – which forced more development that was hard to get fully paid for.

People at the buying organisation had a feeling of frustration as it was so difficult for them to make the vendor do what they really needed.

This was the most important obstacle for the people working with the system or the development of it – they did not recognize “lack of usability” as the most important problem to solve.

The requirement process

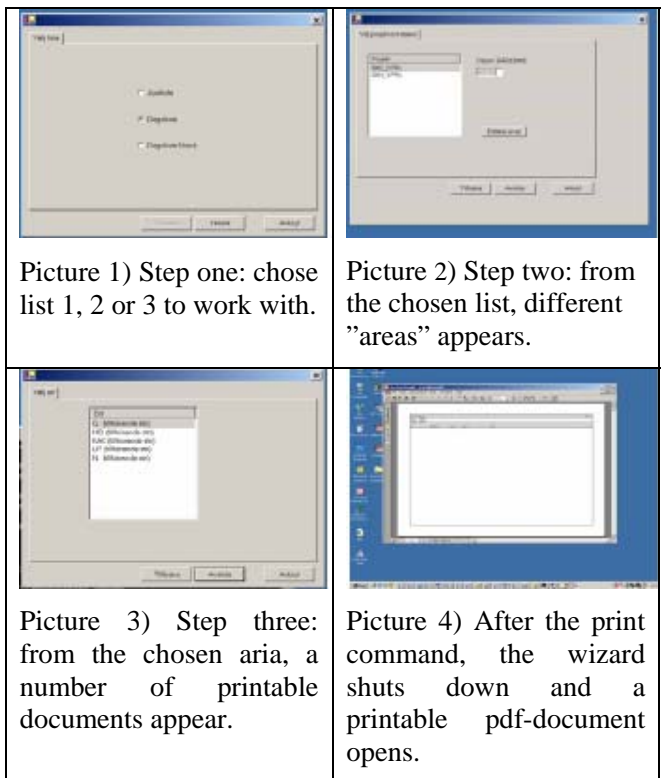
Requirements from the buyer were explained in lists of requirements or simple use-cases and contained just

what the buyer expected **should be able to do** with the system. The requirements were often settled down in co-operation with the selling organisation.

One of the use-cases in the study contained following requirements:

- 1) the user should be able to choose list “1”, “2” or “3” to work with
- 2) from the chosen list, a number of different “areas” should be able to be chosen from, and the wanted date should be set
- 3) from the chosen “area” the user should be able to choose the exact document that she wants to print

The outcome looked like this; a four-stepped wizard:



Picture 1) Step one: chose list 1, 2 or 3 to work with.

Picture 2) Step two: from the chosen list, different "areas" appears.

Picture 3) Step three: from the chosen area, a number of printable documents appear.

Picture 4) After the print command, the wizard shuts down and a printable pdf-document opens.

The wizard fulfils the specification completely, but it is unfortunately also making the user go through the same steps - in the same order - as the code is written. It is working exactly as Alan Cooper describes how the flow becomes when it follows the programming code [A. Cooper 1999].

Programmers think about software in terms of the individual tasks that users must perform, and their software reflects that orientation. Most software is a collection of features, one per task. Each separate feature has a corresponding user interface element. (s.1 Cooper 1996)

Usability work

Studies of the product in common use altered knowledge about the system such as

1. extensive user point and click actions
2. laborious process to enter dates

Specific questions to the end-users about how they where going to use the function and when they were going to use it, altered knowledge such as

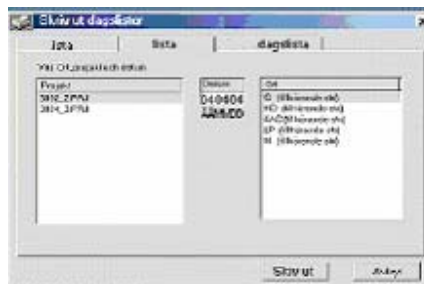
1. they usually printed a lot of different "areas" from all of the lists
2. they printed all of the documents in the end of the day, at the same time - and the lists they printed were almost every time for the next day.

In other words, they would have to open the wizard and go through the same steps over and over again, telling the system: "start the printing function, choose same list as before, next, choose the same "area", next, type the same date, next, choose the next document, print, and then start the printing function again - at least 20 times at the end of the day.

Each bit of interface involves a little bit of added overhead, what I call "excise," or extra work that the user must perform merely to manage the idiom, with no benefit to the user or the business. /.../ After a while, the user spends as much time flipping between views, scrolling down lists and summoning dialogs as she does useful and productive work. (Cooper 1996)

The usability design

With the usability knowledge it was obvious that the wizard would not support the buying organisations needs. It was therefore redesigned without the steps.



Picture 5) Usability designed function offering the possibility to print several documents in a row with a single click action. There is no need to fill in the date for each document, and the system suggests the date for the following day.

Both solutions fits the use-case, the "functionality" is exactly the same. It was easy for the programmer to redesign the wizard to make it math the usability requirements. It is obvious that the information about how the function should be designed to support the end use is missing in the order.

Economic benefits

When the two solutions were demonstrated for the buyer as prototypes, they claimed that it was obvious that they should never have the wizard – because they felt it was all wrong.

But without the usability work they would have the wizard; and we can assume that they would have claimed that the wizard didn't fulfil their needs - and that they wanted it to be rebuilt. If that would have been the case we can also assume that the vendor would have verified that the wizard fulfilled the requirements.

But the vendor was dependent of the buyer – and dependent of them being satisfied with the system. Therefore it was very hard for the vendor to make any profits on such correction orders. In fact, such corrections were very expensive for the vendor.

In the study prototypes have proved to be good means for communication. A prototype can facilitate a dialogue around a common theme, not only between the users and the interaction designer - but also between buyers and vendors. If the buyer and vendor would have worked more with usability and prototyping it is more than likely that it would reduce the procuring costs, for both parts, because it would reduce the iterations after deliver.

DISCUSSION

If the buyer can't decide the usability in the buying situation, usability is not a selling argument. I can just

go to my self; I think it is very hard to go to a store and decide which product I find have usability designed functions, before payment and I can use the product – just as the buyer in the study thought it was difficult to get “the right functionality” in their orders.

In this case study prototypes showed the customer the different outcome, and the usability turned out as something important. To make it possible for the customer to determine the usability before the buy is something that should concern usability professionals, for development projects as well as for customer-market products.

Usability literature seldom includes discussions such as assumed payback time or quantifies the economic benefits in economic terms of the work; while neither classical IT-development models nor capital expense budgeting methods tend to recognize usability issues or benefits. Financial factors, such as price models for procurement, are therefore often difficult obstacles for those who wish to work with usability.

CONCLUSION

Usability should play a more important role if it was easier for the customer to determine the efforts of usability at the time of buying.

In development projects prototyping and usability methods are making it easier to reach a common understanding of what should be built and how it should work. The improved requirement specification and procurement process that the usability methods bring -- as well as the increased communication between buyer and vendor -- is something that the buyers in the study have shown great interest in. An improved requirement specification turned out to be of great interest for the vendors as well.

That common understanding, and its observance, then becomes an important factor which enables the delivery of the right functionality – i.e. the functionality that the buyer really needs.

REFERENCES

- 1.Cooper A. *The inmates are running the asylum* SAMS USA 1999
- 2.Cooper A. *Goal-Directed Design*
http://www.cooper.com/articles/art_goal_directed_design.htm, downloaded September 10, 2004
(Published in Dr. Dobb's Journal, September 1996)
- 3.Gunnarson D. *Usability - the art of delivering what the procurer requires* Master's thesis in pedagogy with cognition science alignment 2004, Department

of Education, Stockholm University in cooperation with IPLab, NADA, Royal Institute of Technology

