

INTERACTIVE TEACHING OF BUSINESS SYSTEMS

How to explain for a user of a Business System how it works

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Keywords:

- * **Business Systems:** Systems that handles finance, planning, prognosis and offer aspects of management of an organizational structure.
- * **Administrator:** A high priority user that can change and make installations on systems who usually have full access.
- * **User:** A regular user that has limited access to a system (for the reason to just use an installation.)
- * **Network Schematic:** A drawing of the network, computers, individuals, rooms etc.
- * **Network Diagram:** A drawing of the network actors, computers and streamline of data.
- * **Sharepoint:** A freeware web portal solution provided by Microsoft.
- * **PDA:** Personal Data Assistant
- * **Sante Academy:** A collaborative unit of Swedish Universities that focus on the use of Business Systems in Business courses.
- * **Rich Picture/Roadmap:** A symbolic collection that describe a plan with formations of drawings or text.
- * **Database:** A collection of data containing values, defined by user or predefined by a system.
- * **Manipulation:** The ability to change a design on a system that's designed to be changed. Semi Administrative abilities.
- * **Design:** A formation constructed from a plan or a plan itself being designed.
- * **Virtualized Farms:** Computers acting like Servers in a controlled environment, 1 Real server can contain about 4 Virtualized Servers.
- * **CFA:** Center for Business Solutions at the School of Business, Economics and Law "Handelshögskolan".

Abstract: In this article we will come to terms of how to best inform our students about Business Systems construct, in which they need to understand their position within the use of that system, how it's formed, what it is and which systems are direct or indirect bound to the same system. How do we teach someone that's focused in business and doesn't understand IT-technology as a developer or administrator, and still this person needs to understand how to manipulate data and set up databases, courses that are not that common in business schools today. How do we "roadmap" so that the user of this course understand the connections? How do we interact with students to take charge in the way of the designer and support person at once?

INTRODUCTION

In order to grasp a Business System of any kind is the understanding of building it, it may seem today that a system of that usage is plainly a "user-oriented" system, not a software that needs to get

"installed" by the same user that "needs" it. Yet the systems are somewhat open for the concept of manipulation. It's intended that the user needs to manage their work space, they are in fact their own "architect" in many scenarios when working with

these kind of softwares. How do we make them understand that?

Urban Ask one of the senior teachers and founders of CFA states that

- *“Without this knowledge several aspects when understanding Business Systems gets lost during my coursework with students. It came apparent for me that students will come across allot of these issues when learning Business Systems, I had this problem setting up my coursework.”* Urban Ask (2009)

He also had to learn how it connects to different sources and locations in order to work with his coursework, this should be something obvious by now.

1.1 The Issues for the Head of Technology

My position at CFA is the “Head of Technology”, it means that I provide the knowledge, software, hardware and contacts to our vendors. In this position I build environments much like and mostly more advanced than the environments look like in the business world. Many of these constructs are scattered online solutions on our vendors side and allot of them are “Virtualized Farms” where several servers are running different Business Systems simultaneously, they are easily accessed as a guest user such as a student for them to start working and trying this software out. However several other courses are on how to design their own Data Warehouses or Databases, construct rules and fill this areas with data. The setup at hand are finished, they are already up and running and have their rules, data storage in place. My issues then became clear that with the students I sometimes have to teach what is possible and not possible for them to do. The question is often “why is this not possible”? It's not apparent for them that they cannot be Administrators for everything, and that the systems are not on the same computer as they are working on. Have in mind that these groups differ allot in age and IT competence, most of them have the same “child like” view of what is in front of them. “If I can touch it, it must be somewhere close”. It's not uncommon, it's not weird, it's IT. IT is so advanced today that most of it seems like it's right there in your hands and you are the “owner”, literary; you can have these systems in the palm of your hand on a PDA. When it's in fact someone else's construct and you are just a user. So how do I describe this to a person that thinks that “the world is flat”.

It came apparent to me that a new kind of a Design course would be optimal for the understanding of how the architecture works, why is it so potent in it's usage and how does it work?

1.2 Design

Most software used within Business Systems are constructed to be “open” for manipulation, the user construct their own work area and in which they also choose what data to work with. In my teachings at the Business School is usually the use of Business Systems and the “Technology Base” on which they run. Why this is important for every student to understand is where they are in this systems, more and more of these products claim that standard users should understand how to connect to databases, manage users and giving the correct user rights.

In which case it comes apparent that we need a course that the student gets a choice of platforms, get instructed on how and why they have that platform, how to install, manage and what may come to pass in usage of this installation. Why is it slow? Where is the Data? Is this how I want it to work? Is there a better way? It also comes apparent that some kind of a “roadmap” would help. Peter Checkland’s Soft Systems Methodology (1981) for gathering information about a complex situation is this kind of a method. It’s very common that a “designer” and a customer together paint a “rich picture” to describe their needs and understand each other on what to accomplish.

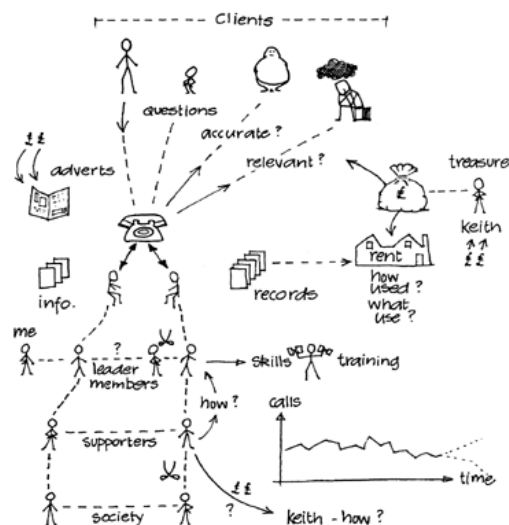


Figure 1: Rich Picture

This is a method for the students to give their thoughts of how they think it works, and that later for the teacher to evolve their understanding of IT. This is also another step to make different designs for the student and maybe find a pattern on how to teach in the future.

2.1 In order to design: UCD

My choice is to design as described from Cross (1995) is that the designer has to be constructive and innovative in the meaning of changing the near future. This is the role a student must “play”.

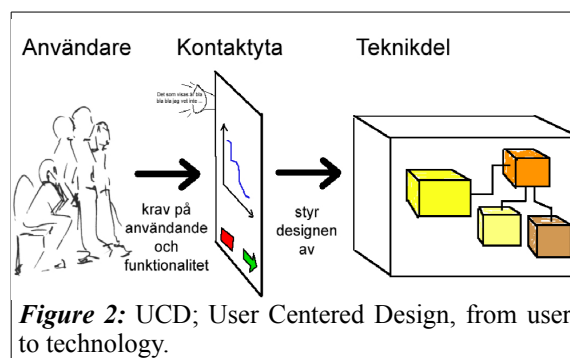


Figure 2: UCD; User Centered Design, from user to technology.

2.2 Typical Network Schematics

Another example of design is for a organization that works with enterprise hardware such as a Network

centered design of another business, it's a common way to describe for the customer how the Network will work for them. Here it's normal to point out what they already have and what they need so the description of what is common to order in such a Network. This being a somewhat of a mock up of they can expect to have in a near future. This Network schematic is now a working model for a company called Zebro, and is constructed by a company called Datanova Sweden AB.

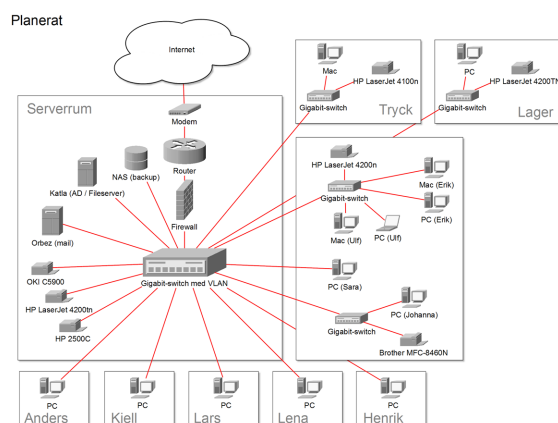


Figure 3: Zebro Network Schematics in “Lanflow”

This Network Schematic is what I would call the “support organizations way” of providing a “Rich-Picture” or “Mind-Map” so that the customers interests and “location” are provided in the same arch of paper. Have in mind that a schematic of this kind is not the same as the support personnel is provided though they have to be informed of several other issues like; ISP providers, Switch boards, Legacy Systems to be converted etc, this is however not interesting for the customer because the understanding of this is somewhat “to advanced” to comprehend. The things to focus on here is the clustered way of describing where things are, there are names of individuals, rooms and the cloud like internet outside. This is not to be confused with a “Network Diagram” where you mostly just draw the network areas within these clusters and not provide individuals or room names.

3.1 First Session: Providing the Tools with Role Play

I would establish a role play where the student acts as the customer, talking to me as their teacher first.

In which they have a case for setting up a Business System for their own company. Depending on what kind of business it's for, the outcome will be different, the systems provided are already installed and finished so there would be test runs on which system that would be the most potent for their company. In which they will place the order from me the Designer in this case. I describe the pros and cons about their choice with Rich Pictures/Road Maps on how to implement it. This is based by the UCD and the Network Schematics as a Rich Picture collaboration.

3.2 Second Session: Changing the Role Play

There's a second stage after this where we change roles, I act as the customer instead, where I also interact as a narrator for what their thoughts should be “on the other side of the table”. In which they now have the ability to change the Design based on what we hope to be a progress on their previous choice, now that they understand the pros and cons in this turn.

3.3 Third Session: Collecting

The students make a presentation of their experience with the choice of Design now that they understand systems involved. When they comprehend this they can now easily point out on this “map” where they are presented in their profession, it should also be apparent to them what area they should focus their attention on in the future. From here they can now navigate their thoughts because they found a “land mark” to triangulate from.

3.4 Fourth Session: Store and Construct

Based on John Allison (2009) paper on Virtual Worlds as the teaching ground, making these sessions as an online experience would be optimal, if these sessions are documented and illustrated section by section it should be possible to make them all in a sequential experience online for people to see. Though the experience may differ in this case because the voyeurs of these cases will not experience their own thoughts in the design face, though it would however make it possible to provide cases for further studies in this matter, virtualised or not.

Interactive “Flash” movies in combination of the relevant software would be provided in a Sharepoint environment where the students have individual accounts for each login. In these categories of scenarios and softwares in use they will also find their course materials for each exercise. This being provided at the start of every term so they have time to explore before the lessons starts. This is based by some sections of the E-Learning Quality of HSV (2008). This method is already underway at the Sante Academy Portal that CFA provide coursework in this fashion.

SUMMARY

So what have we learned? In contact with today's industries of Business Systems and Networks, they are depended on each other, and to explain this connection between the end user software usage and how it's used is not that hard for the costumer it seams when being provided more information by a “Network Schematic”. However a Student today will only come in contact with the actual software not understanding where and why is works, even less how they are accessing it, what if they had to describe this to their costumer in the future when trying to sell a Business System? They would probably contact their local support group and get a “Network Schematic”, but have in mind that a support group working with these matters have their own rules and routines on how to implement networks, they get their setups from the vendors that design these systems. The students today are being “robed” from the innovative spirit that comes out of this, what if they have new ideas and wants to understand how all the “strings are attached”? Making them design and become the architecture of the apparent choices will make them understand and hopefully help them towards a better work life experience.

- *“Real knowledge like everything else of value, is not to be obtained easily. It must be worked for, studied for, thought for, and, more that all, must be prayed for.”* Thomas Arnold (1795 – 1842)

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