Assignment HCI-3

Title: Contextual Enquiry.

Problem Statement:

Conduct a contextual enquiry for selected product / system.

Learning Objectives and Outcomes

- Understand need of contextual enquiry concept.
- Carry out enquiry for selected product system.

Requirements:

Notebook and Pen. Selected group of audience, Response Records.

Theory

Contextual enquiry is user-centred design research method, part of contextual design methodology. It is usually as an approximately two-hour one-on-one interaction in which the researcher watches the user in course of user's normal activities, and discusses those

with user.

It defines four to principles guide the interaction.

Contextual Interviews are conducted in user's actual workspace.

The researcher watches users do their own tasks and discusses any artifacts they generate or use with them. In addition, the researcher detailed re-tellings of specific past they are relevant to project focus.

Partnership: User and researcher collaborate to understand the user's. work. The interview alternates between observing user as hel she works and discusses what user did and why.

Interpretation: Researcher shares interpretations and insights with user during interview and user may expand or correct researcher's understanding

Focus: Researcher steers the interaction towards topic which is relevant to team's scope.

A contextual interview generally, has 3 phases, which may not be formally seperated in interview itself.

1. Introduction

   Researcher introduces his / herself and may request permission to record or start recording. The Researcher promises confidentiality to user solicits the user on specific tasks the user will work on during the interview.

2. The Body of Interview

Researcher observes work and discusses observation with user, and takes notes, usually handwritten, of everything that happens.

3. The Weap-Up

Researcher summarizes what user gained from interview offering user a chance to give final corrections and clarification.

Before a contentual enquiry, user visits must be set up. The users selected must be doing work of interest currently must be able to have researcher come into their workspace and should represent a wide mage at different types of users. Contextual enquiry may gather data from as few as 4 users to 30 or more

Following contentual enquiry field interview, method defines interpretation sessions as a way to analyze data.

In an interpretation session, 3-8 team members gather to hear researcher re-tell story of interview in order.

Contextual enquiries may be conducted to understand the needs of a market and scope opportunities. They may he conducted to understand the work of specific role or tasks to learn the responsibilities and structure of role.

Contextual Inquiry

Contextual inquiry is the systematic analysis based on observations of users performing tasks / activity in a context.

Hypothesis is made linking cause - effect based on these observations. The hypotheses are tested in discussion with the users. As a result of this the context itself gets understood in all the dimensions.

It is a field-based data collection technique employed to capture detailed information about how users of a product interact with the product in their normal work environment or in other words- interact with the product in its context of use.

Context here means the anchoring environment /situation/ reference / work activity - with respect to which a designing process (solving a problem or conceptualizing a new product) is underway.

In HCI, GUI - Graphic User Interface designers adopt a popular methodology named as Human Centred Design (HCD) in which all decisions are taken with the Human User as the main focus. In Human Centred Designing methodology, understanding the users, their needs, the context in which these needs raise and the context in which the user attempts to fulfil needs - is the first step. Specific techniques have been developed to identify and specify the context of use. This process is called "Contextual Inquiry".

Contextual Inquiry is predominantly a qualitative method. In some cases, it is a qualitative cum quantitative method of research. The techniques used in Contextual inquiries are rooted in Ethnography, Psychology, and Ergonomics Design. Results of Contextual Inquiry are used to formulate the Users' conceptual model based on visualization of the user's Mental Maps of tasks, intentions, interpretation and action.

Advantages

1. This method being open ended makes it valuable deep-mining of tacit knowledge from the user. Tacit knowledge is that

knowledge which normally the user is not consciously aware of themselves.

2. Even though both qualitative as well as quantitative data is involved, this method is reliable and scientific.

3. The depth and detail of the information uncovered by this method cannot be done so by any other method.

Disadvantages

1. Since the majority of information is qualitative it is not statistically significant.

2. The inquirer needs to be highly skilled in multiple disciplines such as Ethnography, Psychology, Culture, Design and HCI.

Methodology

1. A contextual interviewer observes users as they perform the tasks.

2. Asks questions on the users' actions as they sequentially unfold so as to understand their motivations and strategy.

3. Development of a shared interpretation of the work is done through discussions between the inquirer and the users.

4. Questions like what happens when things go wrong in your work / task execution sequence?

5. What are the practical difficulties faced and needed to be sorted out?

6. Take care not to lead the user by prompting while inquiring.

7. Conduct interviews at the user's actual work / use settings/ place /environment.

8. Inquiry alternates between observing and discussing/clarifying from the user as to what the user did and why. In this technique the researcher interprets and shares insights with the user during the interview /discussions.

9. Often the researcher's understanding stands corrected by the user.

10. Researchers need to take care that the discussions do not move away from the focus of the contextual inquiry.

Inquiry Techniques

1. Open ended questioning based on observations

2. Pre-prepared Questionnaire (User Survey)

3. Ethnographic observation diary with notes (These notes are converted into Affinity diagrams; personas; task hierarchy diagrams etc. by the HCI designer as part of the Contextual Inquiry documentation)

4. Focus group interviews

5. Structured discussions

6. Photo / video documentation.

7. Affinity diagrams / Tree / Hierarchy diagrams

8. Storyboards

9. Mind maps

Methods for analysing the data collected

Data collected from contextual inquiry is analysed, interpreted and finally visualized and represented by the

researcher using one or all the following models which are part and parcel of the HCD process.

1. Flow model - represents the coordination, communication, interaction, roles, and responsibilities of the people in a certain work practice. It is based on the logic of flow of information between different entities making up the system within the context.

2. Sequence model - represents the steps users go through to accomplish a certain activity. Sequence models are linear and sequential in nature. Sequence models of a number of smaller tasks when integrated represent the interconnected sequence within a larger system.

3. Cultural model - represents the norms, influences, and practices that are present in the work environment and which are specific to a particular region or are traditionally followed as local norms. Often culture specific comments or differences are mentioned using either flow diagrams or sequence diagrams or both. Language for example is a Culture model variable.

4. Artifact model - represents the documents or other physical things that are part of the work / task execution. These artifacts are aids to the tasks created while working or are used to support the work. Example would be a Paper based voucher simultaneously filled up in a particular step of a sequential task flow.

5. Physical model - represents the physical layout of the environment where the work tasks are accomplished; often, Simple examples would be office layout, network topology,

or the layout of icons on a computer display environment. The flow of work as it moves in the physical environment is represented as a map.

Limitations

Contextual enquiry is resource-intensive. It requires travel to informants site, a few hours with user, and time required for interpreting result.

Conclusion:

Contextual enquiry is carried out for selected product system.