HCI Assignment 1

Roll No: 41163

Title:
Identify specialized users and related facilities for a selected product / system and make necessary suggestions for its improved accessibility design.

Objective:
- To identify the users of proposed HCI application.
- To specify goals and objectives.
- To list down need of the user for selected product/system.

Theory:
Human–computer interaction (HCI) is the study of how people interact with computers and to what extent computers are or are not developed for successful interaction with human beings. HCI both observe the ways in which humans interact with computers and design technologies that let humans interact with computers in novel ways.

HCI consists of three parts: the user, the computer itself, and the ways they work together.

1. User

   By "user", we may mean an individual user, a group of users working together. An appreciation of the way people's sensory systems (sight, hearing, touch) relay information is vital. Also, different users form different conceptions or mental models about their interactions and have different ways of learning and keeping knowledge and. In addition, cultural and national differences play a part.

2. Computer

   When we talk about the computer, we're referring to any technology ranging from desktop computers to large scale computer systems. For example, if we were discussing the design of a website, then the website itself would be referred to as "the computer". Devices such as mobile phones or VCRs can also be considered to be “computers”.

3. Interaction

   The communication between user and system is called as the interaction. There are obvious differences between humans and machines. In spite of these, HCI attempts to ensure that they both get on with each other and interact successfully. In real systems, the schedule and the budget are important, and it is vital to find a balance between what would be ideal for the users and what is feasible in reality.

Know your users

The start of any interaction design exercise must be the intended user or users. Before you can answer the question “How do you make our user-interfaces better?”, we must first answer the question “for whom?”.

Over time many people are affected directly or indirectly by a system and these people are called stakeholders. Following techniques are used to know user. Who are they?

The first thing to find out is who your users are. Are they young or old, experienced computer users or novices? You may need to ask this question again as you find out more about the system and its context. This question becomes harder to answer if you are designing generic software, many different users with different purposes and characteristic. However, it is probably better, designer should think of several specific users.

Talk to them

There many ways to talk with user: structured interviews about their job or life, open-ended discussions, or bringing the potential users fully into the design process.

Watch them

Watch what people do as well as hear what they say. This may involve sitting and taking notes of how they spend a day, watching particular activities, using a video camera or tape recorder. It can be done in an informal manner or using developed methods such as ethnography or contextual inquiry. The observations tell you what they do, they will tell you why.

Use your imagination

If you cannot involve actual users, you can at least try to imagine their experiences. One method that has been quite successful in helping design teams produce user- focused designs is the persona. A persona is a rich picture of an imaginary person who represents your core user group.

CASE STUDY : TELEGRAM

What is Telegram?

Telegram is a freeware, cross-platform, cloud-based instant messaging (IM) software. The service also provides end-to-end encrypted video calling, VoIP, file sharing and several other features. It was launched for iOS on 14 August 2013 and Android in October 2013.

Telegram provides end-to-end encrypted voice and video calls and optional end-to-end encrypted "secret" chats. Cloud chats and groups are encrypted between the app and the server, so that ISPs and other third-parties on the network can't access data, but the Telegram server can. Users can send text and voice messages, animated stickers, make voice and video calls, and share an unlimited number of images, documents (2 GB per file), user locations, contacts, and audio files.

Features :

- Account : Telegram accounts are tied to telephone numbers and are verified by SMS. Users can add multiple devices to their account and receive messages on all of them. Connected devices can be removed individually or all at once. The associated number can be changed at any time and when doing so, the user's contacts will receive the new number automatically.

- Cloud Based Messages : Telegram's default messages are cloud-based and can be accessed on any of the user's connected devices. Users can share photos, videos, audio messages and other files (up to 2 gigabytes per file). Users can send messages to other users individually or in groups of up to 200,000 members. Sent messages can be edited up to 48 hours after they have been sent and can be deleted at any time on both sides.

- Secret Chats : Messages can also be sent with client-to-client encryption in so-called secret chats. These messages are encrypted with the service's MTProto protocol. Unlike Telegram's cloud-based messages, messages sent within a secret chat can be accessed only on the device upon which the secret chat was initiated and the device upon which the secret chat was accepted; they cannot be accessed on other devices. Messages sent within secret chats can, in principle, be deleted at any time and can optionally self-destruct.

- Channels : Channels are a form of one-way messaging where admins are able to post messages but other users are not. Any user is able to create and subscribe to channels. Channels can be created for broadcasting messages to an unlimited number of subscribers. Channels can be publicly available with an alias and a permanent URL so anyone can join. Users who join a channel can see the entire message history. Users can join and leave channels at any time.

- Video and Voice Calls : The calls are built upon the end-to-end encryption. Connection is established as peer-to-peer whenever possible, otherwise the closest server to the client is used.

- Bots : Bots are Telegram accounts operated by programs. They can respond to messages or mentions, can be invited into groups and can be integrated into other programs. It also accepts online payments with credit cards and Apple Pay.

- Stickers : Stickers are cloud-based, high-resolution images intended to provide more expressive emoji. When typing in an emoji, the user is offered to send the respective sticker instead.

- Live Location : For either 15 minutes, one hour, or eight hours, Telegram users can share their live location in a chat

Users :

- Daily user (common man)
- Businesses
- Universities

Suggestions to improve Accessibility Design :

- The first and most obvious pain of Telegram users is that all messages from chats and channels fall into one list. It will be better to separate channels and chats into different tabs, so they would have different meanings for a person. Messenger and groups for communication and channels for content consumption.
- A large number of unneeded chats that create visual noise. Replace the feature Delete with Archive. This feature will help hide unneeded chats and speed up access to the current ones. Archived chats will get hidden in the settings. And if the archived chat has the notifications enabled, it will return to the general list of chats when a new message arrives.
- It takes a long time to look for a work-related channel. This can be solved by creating folders for different types of channels.

Conclusion:
Thus, we have studied important parts of HCI and different ways to know users for selected product/system.