Assignment 03, Group M01, Mon 12-14 (English)
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33.5P

Exercise 1 - Ten golden rules of interface design 10

1) Apache OpenOffice Writer Version 4.1.5 1

2) 9

1 1. Keep the interface simple

The central part is used for working space, while the upper and the right part are used for buttons and settings to change a lot of things like formatting, writing, ect., so it's not simple at all.

2. Speak the users language

1 The language is determined on just words to describe the categories of the settings and explains itself ~~and it is on the language the user downloaded.~~

3. Be consistent and predictable

The buttons are redundant (some on the side and top), but they are clearly sorted in categories that are quite obvious to see and the categories on the side are sorted randomly. 0.5 (is it also consistent across other apps? is it predictable?)

→ Not consistent but predictable

4. Make things visible and provide feedback

The interface is sorted in categories and you get the button function if you hover with the mouse over it, also the button picture indicates the function. → fulfilled 1

5. Minimize the users memory load

Frequently used options are good to remember, but not often used options are pretty tough to find, because of number of functions. → not fulfilled 1

6. Design for error: Avoid errors, help to recover from errors, offer undo

There are different options to provide errors and to undo errors, also if the program crashes there is a recovery function. → fulfilled 1

7. Design clear exits and closed dialogs

In this program the user start on a empty page and don't do any steps, without selecting the right program of Apache OpenOffice, further the close option of this program asks the user if he want to save the work. → fulfilled 1P

8. Include help and documentation

There is a help function with a documentation and also a short description of the button you hover over is shown. → fulfilled 1

9. Offer shortcuts for experts

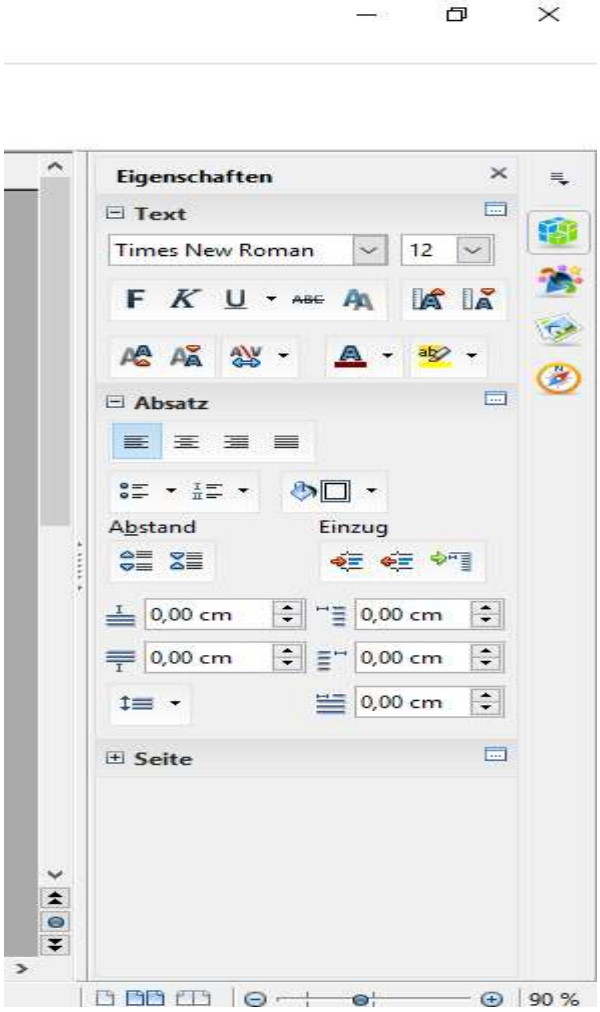
There are shortcuts on the most common buttons for a much quicker use. → fulfilled

0.5 (which ones? as last time in the tutorial: in the exam state examples, otherwise we have to (forced by the correction scheme to substract points)

10. Make the system responsive

The system responsive is good, for example while scrolls the texts move on and there is no lag while doing this. → fulfilled 1

Sidepanel



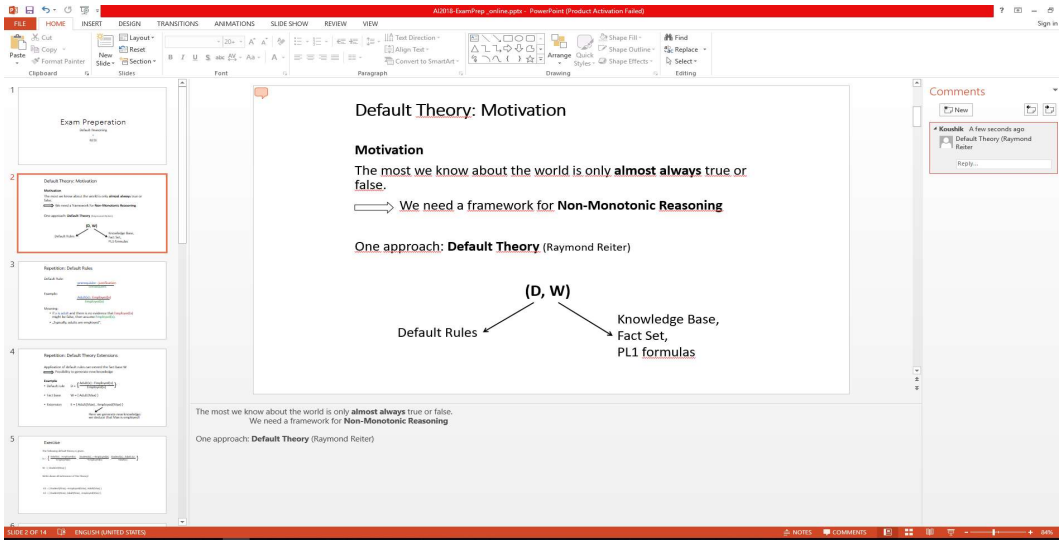
Exercise 2: Direct Manipulation Paradigm 10

My selection: Microsoft PowerPoint. 2

1. a) With the 1st principle, the user can interact with the visual representation as well as the user
1 can see the effect on the current state if they do action. Objects are visually represented (Slides, page, note, comment) and this objects can be acted upon directly by the user through (scroll, zoom, edit note, page and comment).

1 b) The user can do action via click, touch, up/down arrow etc. The user can scroll pages by keyboard (down arrow) or by mouse (round button).

0P (dublicate of a)) c) The user can see the result of one action. Next page/slide would be immediately visible if the user does scroll by keyboard or mouse and here the user get rapid response.



0P (how?, which tools? 2. a) If the user select unnecessary options or drag some unnecessary tools in the slides, it would failed to implement the 1st principle of direct manipulation because it makes the user confused.

1 b) If the user need to add equations or symbols, he/she needs to select equations or symbols from insert tab, then he/she needs to select specific an equation or a symbol from the list and drag it to the slide page and finally fill the equation or symbol box. The whole actions are not supported by the 2nd principle of direct manipulation.

1 c) If the user use 'Delete Slide', a slide would be deleted which is not incremental or reversible actions or if user use 'Reset Slide', the layout of current slides would be changed which would not clearly visible by the user as well as not rapid because the interest of object would not be visually presented.

3. Advantages:

1
- The user can easily interact with objects by speech commands, no further touch, click, scroll is required.
- The user can easily find the suitable option to write and edit the slides by speech commands, no further tapping or searching is required.

Examples:

2
- Go to the next slide by speech commands
- Add new slides, notes and comments by speech commands.

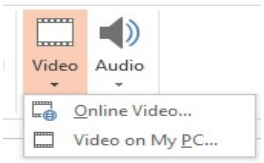
Disadvantages:

1
- The action would not be done if user speech command is not understandable.
- Multiple options would open if different options have a similar pronunciation.

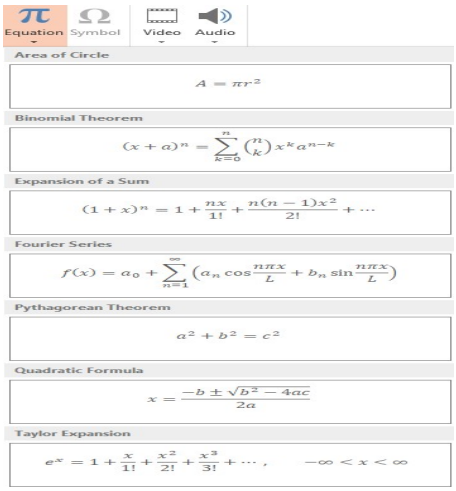
Examples:

- Writing complex is not suitable for speech commands.

2



- Insert a video or a photo is not suitable for speech command because when you drag a photo or a video from your device, your device also needs to support speech commands.



References:

[1] https://www.nngroup.com/articles/direct-manipulation/

Exercise 3: Desktop Interface 3

The important functions are: play/pause, forward, backward, next, previous

1 Fitt's law can be used to design these control buttons to reduce the time required and make it as fast as possible. Since the time to target is inversely proportional to the size of the target.

1 Direct manipulation Paradigm: to design the icons with visual metaphors for the control buttons. And also, because the user gets immediate feedback if his action.

WIMP Paradigm

Windows: To switch between windows without getting distracted

Menu-Contextual windows to open the application and also to provide access to often uses commands like play/pause, forward, backward, next, previous 1

Pointers to make use of mouse for right click option

Common design:

-1 (not own design)

I would prefer:

to split the buttons for forward/next into two and order it in a circle (you had to design one, then you could arrange the buttons as you prefer)

Exercise 4: Zoomable User Interfaces 8P

a) Safari Mobile Web Browser

b) Prezi Web Application

c) The Kremer Collection

1. a) Safari uses ZUI as users can scale text shown in websites by zooming in and out. Also users
1 can navigate the whole web page by just panning across it.

b) Prezi uses ZUI as users can add a slide by just zooming into that slide, and if they want to
1 switch to other slide, they zoom out to obtain the whole overview of the presentation and then zoom into that other slide.

c) Kremer Collection web application uses ZUI as users can examine the details of any painting of
1 it by zooming into it. Paintings are of very high resolution so that users can see clearly the small and exact details of that painting.

2. a) Advantages:-
- Metaphor:- as the zooming in and out in a Safari is something familiar to the users already
1 used Chrome or Firefox web browsers on their mobile phone.
- Affordance:- as it's a virtual application, affordance is perceived by convention as in scrolling up and down in web pages.

Disadvantages:-
- Feedback:- as using the zooming in and out doesn't provide any feedback, no sound or highlighting. 0 (the zoom itself is the feedback since you are maipulating the view)
- Constraints:- as it exploits users' everyday common sense of zooming in and out by using his thumb and pointer fingers. 0.5

b) Advantages:-
- Visibility:- as the functions which you can use to zoom in to a certain slide is visible like the
1 "plus" and "minus" buttons.
- Consistency:- as it's a general thing in all ZUIs, you zoom in and out by using the conventional thumb and pointer finger.

Disadvantages:-
- Metaphor:- as the ZUI in presentations application isn't similar to something the user is already

familiar with, like Powerpoint. basically repetition of the advantage in a) 0P
- Constraints:- the same thing as Safari, it exploits users' everyday common sense of zooming in and out by using his thumb and pointer fingers. basically repetition of the advantage in a) 0P

c) Advantages:-
- Visibility:- as the application functions are so visible that controllers are presented there on the
1 painting to guide you throughout it by zooming in and exploring its small details.
- Feedback:- as when you zoom in the painting, very small details start to appear as an indication of exploring and discovering more small details of the painting.

Disadvantages:-
0.5 - Metaphor:- as the ZUI in exploring paintings of a gallery isn't something familiar with the audience. They just normally do that by going the gallery itself.
- Constraints:- it's a general thing in ZUI, it exploits users' everyday common sense of zooming in and out by using his thumb and pointer fingers. (0P there are many more disadvantages, do not replicate)

3. a) Concerning Feedback, I suggest when touch the screen with both fingers then the screen
1 responds with virtual waves effect in the position where your fingers are placed on the screen.

0P how you would improve prezi? (not providing more interfaces)

b) Concerning Metaphor, I suggest providing more presentations application that uses ZUI other than Prezi, and also increase its advertisement so that users become more familiar with it.

0P how you would improve it? (not providing more interfaces)

c) Concerning Metaphor, I suggest the same thing as that with Prezi to provide more online galleries with paintings that users can interact and explore it as a ZUI.

References

1) https://en.wikipedia.org/wiki/Zooming_user_interface
2) https://prezi.com/
3) http://www.thekremercollection.com/

Exercise 5: Interfaces 2.5

1. *Command-based Interfaces:*

In Command-based interfaces, the user interacts with the computer or system by typing in commands. 0.5

Advantages:
- ~~It does use less CPU processing time.~~ shortcuts are also a kind of commands, in photoshop, they need a lot of CPU time
0P
- ~~The user does not need a high resolute monitor to use this interface, the low resolute monitor is enough to use this interface.~~ see the examples in the slide set 5, i depends on the application

Disadvantages:
0.5/0.5
- A user needs to memorize a list of commands to use this system.

- For the beginner or for the normal user, this interface can be confusing as this is not user-friendly.

2. *Speech-based interfaces:*

In Speech-based interfaces, the user interacts with the computer or system by generating human voice speech or simulated human speech. 0.5/0.5

Advantages:

- User-friendly, easy for normal/beginner people to use, training is not important for the user.
- Appropriate interface for disabled people (e.g. blind people, people who cannot work with hand etc.)

0.5

Disadvantages:

- The user can only use instructed commands (list of commands that have been programmed).
- Speech should be precise and clear otherwise the system cannot recognize the instructions.

0.5

References:

[1] http://www.teach-ict.com/gcse_new/computer%20systems/user_interface/miniweb/pg3.htm
[2] http://www.teach-ict.com/gcse_new/computer%20systems/user_interface/miniweb/pg9.htm