Heuristic Evaluation – Expert Instructions

Methodology

Expert introduction

The chief purpose of this heuristic usability evaluation is to identify usability issues that are currently present in the given application. The exemplary expert evaluators are you: the six members of team 55!

For the evaluation, each expert will receive a copy of this 'expert instruction document,' a video[1] showcasing the various features and functionalities of the client application prototype in its current state, and a link to a Google Forms document[2] that will be used to record the usability issues. The prototype will not be interactive, but the video will be accompanied by comments that describe the the different features. There will also be included several scenes that are not functional yet.

Scope of prototype

The purpose of the prototype is to illustrate the current scope and functionalities of the application and to provide the experts a better understanding of the expected user experience.

Since the prototype is given in the form of a video, experts will not be able to directly and deliberately interact with the prototype, reducing the possible 'free exploration' that can be done. Nevertheless, the video will display the primary and essential features and functionalities in diverse scenarios.

The video shows the current features and functionalities, which can be identified by the annotation that appears in the bottom-left corner of the video.

Moreover, it should be noted that in the video, we consider multiple possible client actions; for instance, when the client enters a problematic server address, we show multiple and diverse user inputs and their corresponding displayed errors.

The prototype will exclude the following features and functionalities:

- rearrangement of cards and columns using drag-and-drop,
- update of a card's title,
- And complete auto-synchronization of changes.

Procedure

Before the evaluation, experts should review this *expert instructions* document as a whole at least once. In order to begin the evaluation, experts should open both the prototype video

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[1] link to the prototype video:
https://drive.google.com/file/d/1ZocjA21bXXyMcu7E1fZi_fynO9sThSed/view?usp=sharing

[2] link to the Google Forms document:
https://docs.google.com/forms/d/e/1FAIpQLSdsQ5FKGbHe_IVHKWJcaqCnnaADw8aEtp8yokUP5bDGtxsvzA/viewform?usp=sf_link

and the Google Form document. Experts should first view the prototype video in its entirety to understand the application. After this initial viewing, experts should review each feature and functionality that is presented in the video (which is identified by the bottom-left annotation) and fill the Google Form document each time they identify a usability issue).

Heuristics

As per a heuristic evaluation design, experts should use the following heuristics (Nielsen, 1994) as guidelines in order to determine whether a particular design, feature, or functionality contains a usability issue.

1) visibility of system status – The user interface should display any ongoing application processes, results and their availability, and the current settings of the application as needed.
2) match between system and the real world – Information and data in the application should be reflect the real world.
3) user control and freedom – Users should be able to deliberately and conveniently control the user interface for their own needs with a wide variety of control operations.
4) consistency and standards – The application should adhere to common, or agreed-upon, standards and measures. The application should be consistent in design.
5) error prevention – The application should have built-in measures to prevent users from committing errors, especially those of the irreversible kind.
6) recognition rather than recall – The application should be able to intuitively prompt the user to perform actions when need or to understand information as presented without much additional operational knowledge.
7) flexibility and efficiency of use – Users should be able to use the application effectively, efficiently, and quickly.
8) aesthetic and minimalist design – The design of the application does not contain any superfluous or redundant elements.
9) help users recognize, diagnose, and recover from errors – The application should efficiently and effectively inform the users on encountered problems, and how to resolve them.
10) help and documentation – The application should have accompanying set-up and operational information that users can use.

Measures

As previously stated, the purpose of this evaluation is to identify usability issues that impair the quality of the application and the user experience it provides. Experts should complete the evaluation individually and independently to ensure the diversity and distinctiveness of reported usability issues.

When evaluating the prototype, the experts should refer to the accompanying video that showcases the application prototype. Whenever the experts identify or encounter a usability issue, they should create and fill a new form entry, which can be done through the provided Google Forms document; Google Forms facilitates the recording and submission process, which will not require any additional action by the experts.

For each usability issue, experts need to provide information in the following efficient format (Cockton et al., 2003):

1) a short specification of the usability issue,
2) a list of possible or actual difficulties that the issue will cause to the users,
3) the specific context in which the issue arises,
4) and a potential cause.

References

Cockton, G., Woolrych, A., Hall, L., & Hindmarch, M. (2004). Changing analysts' tunes: the surprising impact of a new instrument for usability inspection method assessment. *In People and computers XVII—Designing for society* (pp. 145-161). Springer, London.

Nielsen, J. (2003). *10 Usability Heuristics for User Interface Design.* Nielsen Norman Group. https://www.nngroup.com/articles/ten-usability-heuristics/