

How to improve video game menus usability? A specific methodology

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Abstract. Very often video game menus are not user-friendly and are difficult to use and to understand. Menu usability can impact the entire “user experience”: a poor menu, not clearly understandable or not easily accessible through joystick may disappoint the user and cause wasting time moves and a loss of playing will. How improving them? What are the characteristics that define a good menu? In order to identify these characteristics, we proceeded in a three steps analysis: first, we created a specific usability evaluation grid, based on common usability criteria, adapted to the video game world. As a second step, we accomplished usability tests on several games. As a third point, we integrated feedbacks from user tests in the grid, in order to obtain a very powerful usability evaluation tool, specifically suitable to video game menus. Thanks to this tool, menu designers can verify that their products comply with usability guidelines.

Keywords: usability, video game, menus, user experience, test, grid, evaluation, tool.

1 Introduction

The worldwide video game and interactive entertainment industry will grow from \$29 billion in 2005 to possibly \$44 billion in 2011 (DFC Intelligence forecast). This market is very innovative and peculiar for the presence of new consoles, platforms, and devices (such as the Nintendo Wiimote). Moreover, it is acquiring a growing number of users, such as casual gamers and women, people with a profile quite different than hardcore gamers. The Entertainment Software Association notices that 69% of American people are a computer games or video games players. Video gamers developers and editors need to constantly offer new ideas, challenges and a very exiting “user experience” in order to differentiate themselves from the competitors. A good user experience is proposing the gamer a very immersive and pleasant product, namely software with a user friendly interface. Although, very often video games don't give a really good user experience, for many reasons, one of them is a not satisfying menu usability.

2. What a good video game menu is

Video games menus are considered fundamental elements to enter the game or parameter options. Very often, game designers accord little importance to these elements and a limited number of graphics tools exist in order to create effective and aesthetic menus. From the cognitive viewpoint, in-game menus, out-game menus and other interface elements on the screen are a very important component of the game, considered as a whole by the user during playing activity. Then, menu usability can impact the entire “user experience”: a menu difficult to use or to understand, not clearly legible or not easily accessible through the joypad can disappoint the user, make him/her waste time, make him/her lose the desire for playing.

The consequences are thus clearly identified, then how to make the menus usable? Could developers create user-centred video game menus? What are the characteristics that define a good interactive menu?

3. A three steps methodology to improve video games menus

Video games menus are elements the user has to deal with, searching for an item, scrolling a list or interacting with several parameters (check-boxes, text fields and so on). From human computer interaction point of view, menus, such as Internet sites, need to be structured in order to avoid user disorientation (issues related to the “architecture of information” principles), to be easy to manipulate (issue related to the “sensation of control”) and to provide good feedback to the user relating to the available choices, the current system status etc. The same principles available in usability web sites check-lists are thus useful and relevant for video game menu creation and evaluation. Even though these general principles are valid, they need to be declined in a more peculiar way to take into account the specificity of game domain, in particular the user tasks and motivation and the presence of particular interaction devices (such as joystick, joypad and so on).

In order to create a specific tool, useful as well as a guide-line during the creation process and as a check-list to evaluate existing menus we proceeded in a three steps analysis: building a grid, realising user tests to check its effectiveness, integrating this feedback to improve it.

3.1 A specific check-list

First of all, we created a specific usability evaluation grid, based on common usability criteria, adapted to the specificity of menus and of video game domain. We based our work on the existing tools for web sites evaluation, in particular the check-list created by Bastien and Scapin [1] and on the check-list proposed by K.L. Norman for the menus evaluation [2].

The grid was structured on the basis of common usability criteria, such as feedback, control sensation, coherence, cognitive workload and then, after this work step, another fundamental part containing specific questions about selection methods

through different devices, response time, audio feedback, use of function keys on the joypad and so on.

3.2 User testing

The second phase of our research consisted in testing the check-list, to verify the effectiveness of this new tool. The concrete aim of this R&D work is to provide the developers with a tool able to prevent/detect usability problems of video games menus, without engaging usability tests (more expensive and time consuming). To make sure of that, it is important to compare results obtained with the check-list and those obtained through usability tests. Moreover, these tests allowed us to implement in the check-list a fundamental feedback concerning new questions and parameters added during the previous phase.

In order to do that, we tested the check-list on more than twenty games, scoring their usability characteristics for every standard. After this expert evaluation, we accomplished usability tests on six games, related to three different categories (first-person shooter, soccer, car racing). For each category, we selected one game with a well scored menu and a game with menu not complying with the grid. These tests made it possible to determine if the check-list scored correctly menus, comparing the theoretical and the practical results.

Sixteen people participated to these tests. We recorded their behaviour (through screen and device input recording software) and their comments (thanks to “thinking aloud” method). A post-test questionnaire collected also their suggestions and perceptions.

We found a great positive correlation between the theoretical and practical results. For example, concerning the visual feedback of selected option, FIFA 2006 obtained a positive evaluation via the check-list whereas PES 5 showed a lack of usability on this point. Thanks to a task asking the user to change a player for the next match we recorded significant results: average time needed to accomplish this task on FIFA 2006 was 17 seconds (with a standard deviation of 11 seconds) while in PES 5 it was 45 seconds (with a standard deviation of 61 seconds).

3.3 Feedback on the check-list

As a third step, we integrated user test feedbacks in the grid, to obtain a very powerful usability evaluation tool, specifically adapted to video game menus. Thanks to our experimental results, we have been able to refine some questions about the check-list, for example concerning the flexibility of the user interface and the selection methods.

We also took into account user’s comments, suggestions and ideas, in particular about the importance of “sensation of immersion”. This element was considered as a fundamental component of a good user experience. Users attested that a time consuming and complex video game menu bother their immersion in the whole game.

4. Conclusion and perspectives

Thanks to the tool we developed during this research, menu designers can verify that their products comply with usability guidelines. This tool can guide them during the evaluation of an existing menu (allowing identifying usability problems to fix) or during the creation of a new menu (allowing avoiding problems).

Concerning the perspectives of current work, we plan to extend the check-list to the entire game, taking into account the whole main theme of video games usability. This will involve other specific criteria and issues, such as the sensation of immersion (already mentioned by the user during the tests concerning menus), the challenge level, the learning curve etc.

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