

IPTV User Interface Design for Portuguese Elderly users

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ABSTRACT

Research framework

The PHD research, hereafter described, consists in finding answers for the following research problem:

What principles, at both the graphic and interaction levels, should IPTV applications' Interface Design (Internet Protocol Television) follow, so that their interfaces are better suited to the special requirements of Portuguese senior users?

To address the described problem, we started off with an extensive literature review in order to check if data already existed in other research approaches could be transposed into our own work. We found that the available seniors digital interface design literature only considered human factors related with physical, cognitive and sensorial issues, therefore discarding other limitations that could be imposed to the interface Design by a set of issues such as the IPTV Middleware software and correspondent STBs; the TV set medium and; the typical TV broadcast graphic elements. It was also to be confirmed if the literature data was valid for the Portuguese senior population.

So we decided to direct our research towards closing the gaps and suspicions detected in the literature review, and to compare them with software and hardware limitations, medium limitations, broadcast limitations and the Field Trial findings of an interactive TV application for senior citizens (iNeighbour TV), as illustrated in the following info graphic scheme:

IPTV Interface Design Guidelines for senior portuguese users

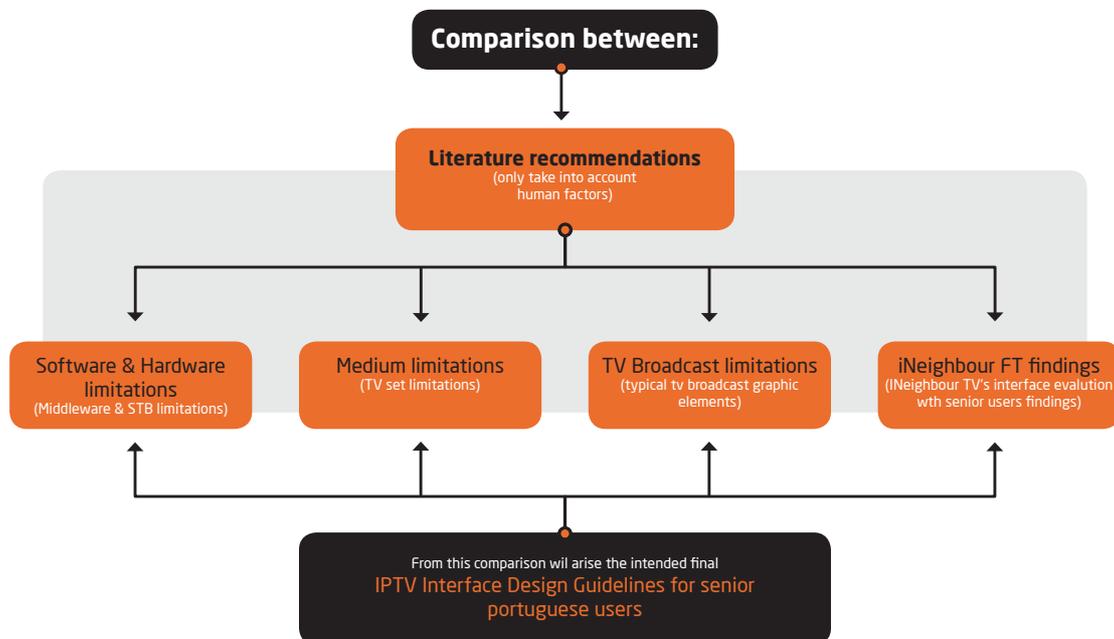


Figure 1 - General overview of the planned research path

Completed research tasks

Taking in consideration this research problem, we have already carried out the study of the limitations imposed to IPTV's Interface Design by the following issues:

- IPTV Middleware software - interface authoring limitations;
- Hardware - STB memory and data processing limitations;
- The medium supporting the graphical interface to the user - the TV set;
- The typical TV broadcast and its graphical elements.

In order to support the research work with a real testing environment, this PHD research was integrated into the iNeighbour TV's Research & Development project. This integration and collaboration resulted in two specific tasks that have also been carried out:

- The iNeighbour TV interface improvement in terms of general graphics and menu iconography.
- Collaboration in the iNeighbour TV Field Trial, where some elements/components of the graphical and interactive user interface, were tested with a sample of Portuguese seniors.

Results & Findings

Our research results and findings will be derived from the literature review and the confront between the data before mentioned and already collected:

Although, we already can, in general terms, state and confirm our initial suspicions, that IPTV software and hardware, due to the limited/locked interface customization/authoring features offered by some IPTV middleware platforms such as Microsoft MediaRoom - the most adopted platform worldwide -, combined with STB limited memory and data processing capabilities, might pose serious limitations and restrictions to the interface's design. We can also state and confirm that both the medium - the TV set - and TV broadcast graphic elements, also impose Design restrictions to the interface.