Human-Technology interaction from Interfaces within the Museums and Cultural Heritage Urban

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1   Context

The visitation to museums where the use of technology engenders interaction between the audience and the work / artifact has been used increasingly in the world. Various digital tools, distance or location where the collection is, are making the most informative and interactive visitations. In this context, ergonomics is critical to the design and evaluation of such interfaces that are a node between the system (work) that must adapt to the visitor (man).

The interaction in museums consists of a broad set of topics and examples, but here we treat the theme of Interaction in Mobile Devices (Mobile interfaces). To perform the tests of interaction with the museums, we used two different devices and operating systems, an iPad with iOS 5.1.1 operating system and a Samsung S3 Smartphone with Android operating system. We downloaded two compatible applications, namely the Emma Lazaruz of the Museum of Jewish Heritage in New York City app, USA, and the ArtLens of The Cleveland Museum of Art Cleveland, Ohio, USA app.

2   Method

We analyzed the different interfaces where the erogonomic relationship between body and mobile is complex and can occur in situ or remotely. They are two distinct types of human-technology interaction.

The first type emerges from the action held at the Museum of Jewish Heritage in New York, where the audience moves through the city using the Smartphone app to interact with the urban cultural heritage. The second type interaction takes place during the

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visitation at the Gallery One at The Cleveland Museum of Art. By using the iPad app called ArtLens, the visitor has a personal museum guide. Loaded with video content, audio, text and static images, the ArtLens app helps visitors to explore the works of art on display in galleries and encourages visitors to create their own personalized tours.

3   Results

Once Emma Lazaruz app is started, the user can see through websites, which sights are close, or move to the important points randomly. Some are within walking distance, but many are located in different parts of the city. In one place, users can hear the audio narration and see photographs of the 19th century of the city of New York, including illustrations and pictures of buildings and structures that were already in place at that time. The tour also features audio commentary from experts, including curator Melissa Martens, also, from a biographer and historian. Local include the Delmonico's Restaurant and The Century Building, the same location of the literary journal "The Century", where many of the articles of Emma Lazaruz, which names the app, were published on the theme of the immigrants causes.

The ArtLeans used app on the iPad is one of the most creative applications for interaction between museum visitors and the works / artifacts. This project puts into practice one of the true vocations of the tablet, which is to extend the reach of the body with respect to information and communication. In this example, we observe a perfect adaptation of work to man, as recommended by the cognitive ergonomics. This project was based on collaboration, teamwork, and an immersion in the content to promote the best process of completing the project, which was executed in record time. The producers worked in collaboration with the museum staff at various times, as, in brainstorming the group to help translate the creative content in innovative experiences for the visitor.

4   Conclusions

By analyzing the examples of museums in this paper, we observe that there is a variation of acceptability of apps compared to the mobile devices. In the case of the ArtLens app, the Gallery One at The Cleveland Museum of Air ", it was only accepted by the iPad Operating System. In the case of the Emma Lazaruz app from The Museum of Jewish Heritage in New York, the same is accepted only for the Android 5.1.1 OS. This partial divergence of devices (Jenkins, 2009) cannot be seen as a hindrance to the future of human-technology interaction in museums. Even so, the designers involved in the production processes of the applications should be aware of the need for expansion of production for compatibility in different versions of the apps available in the market.

What happens is that there are two tasks running at the same time when it comes to mobile devices. Interaction occurs between the body, especially the hands, and mobile devices, while interaction that occurs between the interface and human cognition, especially the eyes and the biological system for capturing and processing information. The relationship established at the physical level of interaction shows that the tablet is a device that can work best for an interaction within the museum, while the Smartphone has better usefulness in the exploration of urban cultural heritage. The sizes of each of these devices are what determine such consideration. We observed that each app studied was adapted in the best possible manner, respecting the user and providing an interaction that achieves a good experience between users and proprietary content.

5   References

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6   Acknowledgments