



Accessibility and User Experience in Digital Applications and Services

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ABSTRACT

A few decades ago, computers and interactive systems were typically utilized for professional purposes. Today, their functionality has exploded to encompass all aspects of daily life, such as education, well-being, communication, entertainment, and social connectivity. Despite the numerous benefits, the ongoing digital transformation presents several challenges. If not appropriately designed, technology can lead to frustration, but also contribute to social exclusion widening the digital divide. With the emergence of intelligent and Artificial Intelligence (AI) systems and environments, digital accessibility and usability have become crucial prerequisites for interactive systems, promoting high-quality user experience and ensuring user effectiveness, efficiency, and satisfaction, as well as inclusivity and equitable access for all (Stephanidis, 2023).

Digital accessibility involves creating and developing digital content, products and services in a manner that ensures that they are accessible to, and usable by, people with disabilities. It has become the focal point of activities of researchers and practitioners in the Information and Communication Technologies (ICT) field since the 1980s. Significant progress has been achieved in various application domains, including web, mobile applications, and games, leading to the development of accessible technologies, guidelines, and standards. However, despite four decades of research and development work, recent studies indicate that advancements have been primarily confined to the research community, while commercial applications still present numerous accessibility barriers. This notable disparity between research and practice is expected to expand further with the emergence of cutting-edge technologies, such as XR, intelligent environments, and AI (Ntoa et al., 2024).

Usability is a concept intertwined with the evolution of the human-computer interaction field, which has today evolved into the broader field of User Experience (UX). This shift emphasizes the need to delve into the emotional, cognitive, and behavioral aspects of human interaction with technology, extending beyond traditional usability metrics. It encompasses the study of users' emotions, beliefs, preferences, perceptions, and behaviors before, during, and after using a product. In today's interconnected digital landscape, incorporating intelligent technologies with advanced monitoring, adaptation, and decision-making capabilities, the complexity and challenges of UX design and evaluation are becoming more prominent (Ntoa, 2024).

In this context, this presentation will outline key aspects of digital accessibility and User Experience and explore the opportunities and challenges presented by the evolving technological landscape.

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