Web Accessibility

Whitepaper
July 2021

Web Accessibility
Whitepaper

Introduction

This document provides information about the MyQ X web user interface (UI), which is since version 8.2 compliant with **Web Content Accessibility Guidelines (WCAG) 2.1, conformance level AA.** The document contains details about the following:

- How MyQ X helps users with disabilities handle their print-related actions, as well as personalize their print environment through the web UI and mobile application, and
- what the received certification entails and how it complies with accessibility legislation across different countries.

General information

Users and their **specific needs** have always played a pivotal role in the development of MyQ products. The first way MyQ's product reflected this was by introducing **broad personalization options** that allow IT admins to set up functions on the Embedded terminal (application running on the touch panel of the device) in a way that meets the relevant needs and work habits of individual users or groups of users.

For MyQ, **all users are equal** and should have unrestricted access to its services, and for this reason the new version of MyQ X 8.2 web UI was designed to comply with WCAG 2.1, issued by the **World Wide Web Consortium** with the purpose of putting in place a unifying standard for accessibility policies worldwide.

The same way many **public places and services** take into consideration people with disabilities, web accessibility makes sure virtual space is open to everyone. It is a tool for developing and designing technologies in a way that **ICT users with disabilities can use them and interact with them.** The main challenge of the virtual environment lies in its form, which is **strictly audiovisual,** and therefore inherently poses demands on perceptual capacity.

What the accessible MyQ X brings to users

Adding accessibility functions to the MyQ X web UI was a very complex task covering almost every aspect of the print solution's digital environment. Below are the main areas that underwent optimization.

Visual text form

There is a considerable number of users with different levels of visual impairments, for whom it might be difficult to receive visual information. The content of the web UI is presented in **readable text form** so that they can be accessed by **screen readers** – software tools (for both PCs and mobile devices) that **convert written text into audio output,** also known as text-to-speech. When using this technology, users can listen to the content of the webpage they are currently on, and the reader offers shortcuts for more comfortable navigation. In order to work properly with these tools, even visual media must have a text equivalent (alt texts, i.e., descriptions for images or diagrams). Though it is primarily aimed towards people with low vision, listening to web content can also be useful, e.g., for people with reading disabilities. Users with low vision may also combine screen readers with **screen magnifiers** – tools which allow them to zoom in on chosen areas of the page for easier perception.

The text content also bears in mind there are **users with color blindness** and avoids situations where different colors used in the text can lead to users missing some information.

Keyboard-only Access

For users with visual impairments, tracking the mouse cursor on the screen can considerably increase the difficulty of navigating on the page.

That's why MyQ X 8.2's UI is developed to be **accessible with a keyboard,** as a more stable peripheral for moving through the website than a traditional computer mouse. Keyboard control is also a helpful solution for **users with motoric disabilities,** who might face problems with operating the computer mouse with precision. Optimization for keyboard-only access also includes **differentiation of the clickable elements** that are immediately recognizable as such by being visibly highlighted.

Content simplification

Another group that needs to be considered when making web content accessible are **users with cognitive impairments** (such as Alzheimer's disease or short-term memory loss), who can have limited understanding or problem-solving capabilities. Therefore, the web UI's content is presented in a structured and simplified manner. This applies to both the language used, as well as an understandable overall structure that is easy to navigate through. To make the user experience with the web UI simpler, the system **communicates with users** and provides them with information about the choices they make (in readable text form). There is also a "help" feature at the users' disposal.

However, web accessibility **is not strictly limited to users with disabilities.** It can be of welcome assistance to a broad spectrum of web UI users. This may include older people, non-native speakers, or non-experienced users in general.

Certification and legislation

In March 2021, after a thorough examination process, the MyQ X 8.2 web UI received an accreditation from the German BIK BITV Testing Authority – **BITV Konform & WCAG Konform.** This certificate confirms compliance with the WCAG 2.1 level AA, which makes **MyQ X the only print management solution offering this level of accessibility.** Meeting the AA level of conformity with WCAG 2.1 means MyQ X can now meet project requirements where web accessibility is obligatory.

In the EU, websites and apps of public sector bodies are subject to the **Web Accessibility Directive.** This includes state or regional authorities or bodies governed by public law that are financed via public contract. At least an AA level of WCAG and compliance to EN 301 549 are required.

In the US, AA-level accessibility fulfills the requirements of **Section 508 of the Rehabilitation Act,** which demands that "Federal agencies' electronic and information technology is accessible to people with disabilities, including employees and members of the public." It also complies with **Title III of the Americans with Disabilities Act.**

The UK defines accessibility regulations in the **Equality Act 2010**. This act requires applying accessibility regulations on websites or mobile applications of public sector bodies, with the AA level of WCAG being the minimal optimization requirement.

In Canada, web accessibility is defined in the **Accessible Canada Act.** It mandates accessibility compliance for digital content of Canada's Parliament and Government, as well as federally-regulated organizations in the private sector.

Cooperation with Twin Cubes GmbH

The adjustment of MyQ X 8.2's web UI for the BITV accreditation was executed in close collaboration with **TWIN CUBES GmbH.** This German company specializing in digital accessibility optimization assisted MyQ web UI developers to meet all the requirements of the accessibility certification and helped them test the new product. The accessibility journey took more than 50 hours of consultations, preliminary reports and final tests, along with hundreds of hours of development between July 2020 and March 2021.

After an initial consultation, the team designed an "Accessibility plan" which consisted of a scheduled list of development tasks which needed to be finished until the next consulting session. Every set of changes and improvements was analyzed and tested manually by accessibility experts. In some minor instances, validation was done using an automated accessibility scanning tool. All modifications were discussed and approved by a TwinCubes consultant. After finishing all major tasks planned during the consultation sessions, it was decided to apply for the first official test, which reported the contemporary project status, confirmed significant improvements of accessibility of MyQ's web UI, and highlighted areas which still needed to be tuned.

The final official test was performed in March 2021 and the latest Accessibility patch was released on 1 April 2021 as part of a completely new software version MyQ X 8.2, which was also certified.

What is the MyQ web UI component?
It is a web-based environment designed for single users and system administrators, who can access the operation, personalization or configuration of the MyQ system from their web browser.

Features available to admins and users in MyQ X 8.2's web UI
When installing the MyQ X 8.2 package, system admins are given the possibility to opt for accessible MyQ X at the very beginning of the product installation, based on the project requirements. However, Accessibility mode can also be activated later, after the software has already been installed.

myq X

ADMINS	USERS
Job management: job upload, job list, job preview, delegate job, favorite jobs, delete job	Job management: job upload, job list, job preview, delegate job, favorite jobs, delete job
Print options, project setup, personal queue setup	Print options, project setup
Print quota overview	Print quota overview
Credit – statement, recharge	Credit – statement, recharge
User details set up (email, phone number…)	User details set up (email, phone number…)
PIN-code change	PIN-code change
Default language set up	Default language set up
Cloud storage access	Cloud storage access
Reports	Reports
Widget addition	Widget addition

CONFIGURATION OPTIONS

System, users, devices

Logs

Dashboard

License status

Quick setup guide

Generate xml for support

List of features available to admins and users.

Accessibility also for the MyQ X Mobile Client

MyQ decided not to limit users needing an accessible environment only to MyQ's web UI component, which requires a web browser as part of their PC operation system. Printing, managing documents, and editing one's account from the mobile phone is gaining more and more popularity in offices. MyQ wants to offer this flexible and convenient way of printing to the broadest spectrum of users possible.

Analogically to web UI optimization, MyQ X app developers followed a strict accessibility release checklist to fulfil requirements for accessible platforms, and adjusted the application for users with disabilities. **The MyQ X Mobile Client has successfully passed the Accessibility Scanner test by Google.**

Hence, as an application affiliated to MyQ X version 8.2, the MyQ X Mobile Client is optimized for **mobile screen readers** (more on those tools above), **TalkBack** for Android devices, and **VoiceOver** for devices running iOS. Once these built-in accessibility platforms are turned on in operation system of the device, users can enjoy printing their documents, configuring their profile, and operating the printing system from their smart devices with the possibility to get an audio output while using the app.

However, communication with mobile screen readers is only one of the steps taken towards an accessible MyQ X Mobile Client. Just as the web UI, the Mobile Client's environment is set up to be legible by people with color-related impairments – readability is also enhanced by a **sufficient text contrast.** For easier operation, all tappable elements have a minimum size of 48×48 pixels and users have an option to undo important actions. Also, all parts of the app's interface such as icons or buttons have a text description to be readable by text readers and quide users easily.