|  |  |  |
| --- | --- | --- |
|  | | Standardization Sector |
| ITU-T Technical Paper | |
| (04/2024) | |
|  | **FSTP-CONF-F.780.2** | |
|  | Conformance testing specification for ITU‑T F.780.2 | |

|  |  |
| --- | --- |
| **ITUPublications** | **International Telecommunication Union** |

Logo, icon

Description automatically generated

|  |
| --- |
| Technical Paper ITU-T FSTP-CONF-F.780.2  Conformance testing specification for ITU-T F.780.2 |

|  |
| --- |
| Summary  Technical Paper ITU-T FSTP-CONF-F.780.2 describes the testing of the compliance of accessible telehealth platforms to the mandatory and recommended features of Recommendation ITU-T F.780.2, *Accessibility of telehealth services*. |

|  |
| --- |
| Keywords  Accessibility, disability, F.780.2, telehealth. |

Note

This is an informative ITU-T publication. Mandatory provisions, such as those found in ITU-T Recommendations, are outside the scope of this publication. This publication should only be referenced bibliographically in ITU-T Recommendations.

|  |  |  |
| --- | --- | --- |
| **Editors**: | Kaloyan KAMENOV WHO | E-mail: [kamenovk@who.int](mailto:kamenovk@who.int) |
|  | Masahito KAWAMORI Keio University Japan | Tel: +81 466-49-1170 E-mail: [kawamori@sfc.wide.ad.jp](mailto:kawamori@sfc.wide.ad.jp) |

© ITU 2024

All rights reserved. No part of this publication may be reproduced, by any means whatsoever, without the prior written permission of ITU.

**Table of Contents**

Page

1 Scope 1

2 References 1

3 Definitions 1

3.1 Terms defined elsewhere 1

3.2 Terms defined in this Technical Paper 1

4 Abbreviations and acronyms 1

5 Conventions 1

6 Background 2

7 Conformance table 3

Bibliography 12

Technical Paper ITU-T FSTP-CONF-F.780.2

Conformance testing specification for ITU-T F.780.2

# 1 Scope

This Technical Paper describes the conformance testing checklist of [ITU-T F.780.2]. More specifically, it provides additional explanations and a checklist for implementors on how to be compliant with the technical requirements which telehealth platforms are expected to ensure as part of accessible telehealth service provision.

# 2 References

[ITU-T F.780.2] Recommendation ITU-T F.780.2 (V2) (2023), *Accessibility of telehealth services*.

# 3 Definitions

## 3.1 Terms defined elsewhere

This Technical Paper uses the following terms defined elsewhere:

**3.1.1 accessibility** [b-ITU-T F.791]: The degree to which a product, device, service or environment (virtual or real) is available to as many people as possible.

**3.1.2 accessibility feature** [b-ITU-T F.791]:An additional content component that is intended to assist people hindered in their ability to perceive an aspect of the main content.

**3.1.3 disability**: The result of the interaction between health conditions or impairments that a person experiences and environmental barriers that may hinder the person's full and effective participation in society on an equal basis with others.

NOTE – Adapted from [b-WHO ICF] and [b-ITU-T F.791].

**3.1.4 telehealth** [ITU-T F.780.2]: Delivery of healthcare services, where patients and providers are separated by distance. Telehealth uses information and communication technologies (ICT) for the exchange of information for the diagnosis and treatment of diseases and injuries, research and evaluation, and for the continuing education of health professionals.

## 3.2 Terms defined in this Technical Paper

None.

# 4 Abbreviations and acronyms

None.

# 5 Conventions

In this Technical Paper:

**5.1** Two types of compliance are used:

– Mandatory (M): elements of the baseline Recommendation that are required to be implemented.

– Recommended (R): elements of the baseline Recommendation that are not mandatory but strongly recommended to be implemented.

**5.2** In clause 7, the conformance table includes the methodology of testing. The indicator for compliance is reflected as:

– Questions that have to be answered for compliance are indicated in *italics.*

– Responses are indicated as:

• Yes: which refers to a single question posed under the methodology of testing

• Yes to all: which refers to more than one question posed under the methodology of testing.

# 6 Background

Globally, 1.3 billion people or 16% of the global population have a disability. During the COVID-19 pandemic, the use of telehealth services increased substantially in many countries, becoming a basic need for the general population. While telehealth provides the means for an equitable health service provision in reality, many persons with disabilities experience difficulties and challenges accessing and using telehealth services. To address this, WHO and ITU developed a global standard jointly for the accessibility of telehealth services [ITU-T F.780.2].

The purpose of this current Technical Paper is to provide a testing specification for compliance, and interoperability for implementors of [ITU-T F.780.2].

The Technical Paper includes several mandatory and recommended elements relating to the accessibility of telehealth platforms for:

– persons with vision impairment and blindness;

– deaf and hard of hearing persons;

– persons with speech difficulties;

– persons with mobility impairments;

– persons with mental health conditions and psychosocial disabilities;

– persons with developmental and intellectual disabilities;

– persons with learning disabilities.

The current paper is meant as a complement to [ITU-T F.780.2]. The purpose is to:

– Assist manufacturers of telehealth platforms in determining compliance of their devices with the [ITU-T F.780.2] through a checklist.

– Provide a framework for testing the compliance of telehealth platforms, for the purpose of e.g., inclusion in the ITU repository and the issue of an accessible telehealth QR code.

# 7 Conformance table

Table 1 provides details on testing the mandatory and optional features of the [ITU-T F.780.2].

| Table 1 – Conformance testing features | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| Type | No. | Features | ITU-T F.780.2 requirement | Methodology for testing | Indicator for compliance | Remarks |
| **Features for persons with vision impairment and blindness** | | | | | | |
| R | 1 | Compatibility with assistive devices | 1 | To verify the compatibility of the telehealth platform with assistive devices:  – Run a test with a screen reader to check whether the text on the platform is accessible.  – Run a test with a braille keyboard to see whether the text can be read.  • *Is the text on the telehealth platform accessible through assistive devices like screen readers or braille keyboards?* | Yes | The feature is recommended because screen readers are one of the most basic accessibility tools for people with vision impairment, enabling them to 'see' the screen. Also, screen readers can display the information on the screen in braille. This is specifically important for people who are deaf and blind. |
| M | 2 | Colour contrast and screen magnification | 2 | Run a test to ensure colour contrast and screen magnification are available as options on the telehealth platform.  • *Is colour contrast available and functioning?*  • *Is screen magnification available and can it enlarge text, images and cursor?*  • *Is alt text available on the images?*  Follow WCAG guidance on the ratios of contrast and size of text. | Yes to all | This feature is mandatory as enough contrast between the text or image and its background, as well as the size of the text, are fundamental for people with vision impairment to be able to read the text or see the image. |
| M | 3 | Telephone call services | 3 | Check the functionality of the telephone call services:  • *Is it functional?*  In case the telephone option is not integrated in the telehealth platform, ensure information including the telephone contact of the healthcare provider/centre is available on the platform, so that the user can communicate through a phone call.  • *Is the phone contact of the healthcare provider/centre available and operating?* | Yes | When a telehealth platform is not accessible or operational, telephone call services are mandatory as an alternative option for people with vision impairment to connect to healthcare providers. |
| R | 4 | Additional download of software | 4 | • *Are all the features of the telehealth platform necessary for its use already available without having to be additionally downloaded?* | Yes | It is recommended that further downloading of the software or platforms are avoided to facilitate the smooth usage of the application (APP) by people with vision impairment. |
| R | 5 | Background music in videos | 5 | Run a test of all informational videos available on the platform:  • *Do all videos include only speech without background music?* | Yes | It is recommended that informational videos on telehealth platforms avoid background music as it can make it hard for people with vision impairment to understand the information provided. |
| R | 6 | Ambiguous and inaccurate wording in videos | 6 | Run a test of all informational videos available on the platform:  • *Do all videos include plain, simple, and easy to understand wording?* | Yes | It is recommended that informational videos on telehealth platforms avoid ambiguous wording and include plain and easy to understand language for people with vision impairment in order to comprehend the information provided. |
| **Features for deaf and hard of hearing persons** | | | | | | |
| M | 7 | Captioning and a monitored chat box | 7 | • *Is captioning available as a feature on the telehealth platform?*  • *Is a chat box available on the telehealth platform?* | Yes to all | Captioning is mandatory for people who are hard of hearing and vital for people who are deaf to be able to communicate with a healthcare provider. A chat box is also mandatory, especially to type the correct wording in case the automated speech recognition captioning fails to pick the voice correctly. |
| M | 8 | Text messaging | 8 | Run a test to check if the text messages are functional on the platform.  • *Is the text messaging option available and operating?*  In case the text messaging option is not integrated in the telehealth platform, ensure information including the telephone contact of the healthcare provider/centre is available on the platform, so that the user can communicate through a text message.  • *Is the phone contact of the healthcare provider/centre available and operating through text messaging?* | Yes | It is mandatory that an alternative option for communication through text messaging when the video or audio are not accessible is available. |
| R | 9 | Remote sign language interpretation or a video remote interpretation system | 9 | • *Does the platform have the possibility to show three screens at the same time?*  This can include the telehealth user, the telehealth provider and the sign language interpreter in case they provide services remotely. If this is not possible, the video remote interpretation needs to display at least two sets of audio and video signals: the sign language interpreter and the medical personnel.  • *Is the screen of the remote sign language interpreter as large as the screen of the healthcare professional?* | Yes to all | It is recommended that a remote or video remote interpretation system is featured on the telehealth platform to facilitate the communication between users who are deaf or hard of hearing and healthcare providers. |
| R | 10 | Subtitles in videos | 10 | • *Do informational videos on the telehealth platform include subtitles?*  Run a test and use it as a reference [b-ISO/IEC 20071-23] on the visual presentation of audio information (including captions and subtitles). | Yes | It is recommended that any informational videos on the telehealth platform include subtitles to be understood by people who are deaf or hard of hearing. |
| R | 11 | Larger size of the screen | 11 | • *Is the screen showing the telehealth provider on the platform large enough to allow users to lip read?*  • *Alternatively, can the size of the screen be increased by the users?* | Yes | It is recommended that the screen on the platform that shows the telehealth provider is large enough to allow users to lip read. |
| **Features for persons with speech difficulties** | | | | | | |
| R | 12 | Voice synthesizers and/or text-to-speech generators | 12 | • *Does the telehealth platform have embedded a text-to-speech generator or a voice synthesizer?*  If yes, run a test to check if the feature is functional and can translate text into audio. | Yes | It is recommended that the telehealth platform includes this adaptive technology option for people who have speech difficulties so that communication with a healthcare provider is facilitated. |
| **Features for persons with mobility impairments** | | | | | | |
| R | 13 | Size of control | 13 | Run a test to check the platform icons and the navigation system.  • *Are icons, buttons, or any other control features on the platform large enough so that they can be easily spotted and clicked?*  Refer to WCAG guidelines on requirements for target size where needed. | Yes | It is recommended that platforms include large control icons and navigation system to facilitate smooth navigation by persons with mobility impairments. |
| M | 14 | Single clicking for platform actions | 14 | • *Do all actions on the telehealth platform require single clicking to be opened or triggered?*  Refer to WCAG guidelines on requirements for pointer gestures where needed. | Yes | It is mandatory that platforms allow users to navigate through single-clicking gestures where possible to facilitate smooth navigation by persons with mobility impairments. |
| R | 15 | Easy access to platform information | 15 | • *Where possible, can information blocks on the telehealth platform be accessed within the screen without having to scroll down?*  • *Does the telehealth platform provide an option to increase time for responding or completing a task such as filling out the online forms when this is required?* | Yes to all | These features are recommended to allow people with mobility issues to access information and perform tasks without facing difficulties controlling their muscle coordination. |
| **Features for persons with mental health conditions and psychosocial disabilities** | | | | | | |
| R | 16 | Sensitive or explicit content | 16 | Go through the content on the platform and make sure no explicit or sensitive information which can trigger emotions among users is included.  If such information cannot be avoided, place a warning message to make users aware.  Provide users with the choice of information format, e.g., text instead of images or video where possible.  • *Is the telehealth platform protected from sensitive content and images?* | Yes | This feature is recommended to ensure no negative exposure to explicit or sensitive content for people with mental health conditions and psychosocial disabilities. |
| M | 17 | Safety, privacy, and security of data | 17 | • *Are measures for ensuring the safety, privacy, and security of data explained on the telehealth platform?* | Yes | It is mandatory that the telehealth platform provide information on the safety, privacy, and security of data to all users, but particularly important for persons with psychosocial disabilities. |
| R | 18 | Simple language and user interface | 18 | • *Is the information provided on the telehealth platform simple and easy to understand and followed by users?*  • *Is the user interface simple to be navigated by users?*  Refer to WCAG guidelines on requirements for language where needed. | Yes to all | It is recommended that the telehealth platform avoids using complicated user interfaces and language or inadequate guidance on how to complete tasks to facilitate the use of persons with mental health conditions and psychosocial disabilities |
| R | 19 | Monitoring of system errors and malfunctioning | 19 | • *Is there constant monitoring for system errors and malfunctioning of the telehealth platform?*  • *Are users swiftly communicated about any identified errors in the system?* | Yes to all | It is recommended that users are promptly informed of any system errors or malfunctioning of the telehealth platform to avoid negative emotions among users with mental health conditions and psychosocial disabilities. |
| R | 20 | Credible information | 20 | • *Is health related information on the platform up-to-date and credible?*  • *Are sources of information being provided?* | Yes to all | It is recommended that all health information is credible in order to build trust among users, especially those with mental health conditions and psychosocial disabilities who may already be apprehensive about telehealth. |
| **Features for persons with developmental and intellectual disabilities** | | | | | | |
| R | 21 | Accessible formats of information | 21 | • *Are key informational documents and materials provided in easy-to-read formats?*  Refer to WCAG guidelines on requirements for an easy read and plain language. | Yes | It is recommended that key health related information be provided in an easy-to-read format so that persons with developmental or intellectual disabilities be active users. |
| M | 22 | Second user screen option | 22 | • *Does the platform have the possibility to show an additional screen for a second user at the same time?*  • *Is the screen of the second user as large as the screen of the healthcare professional?* | Yes to all | It is mandatory that telehealth platforms have the possibility of providing an additional screen for a second user, who may provide remote personal support to a patient with a developmental or intellectual disability. |
| R | 23 | Simple educational material | 23 | • *Does the telehealth platform provide a brief tutorial or educational material in an easy-to-read format?*  Refer to WCAG guidelines on requirements for easy read and plain language. |  | It is recommended that information on how to use the telehealth platform is provided in easy-to-read format so that persons with developmental or intellectual disabilities can be active users. |
| **Features for persons with learning disabilities** | | | | | | |
| R | 24 | Text layout | 24 | • *Is the text, instructions, figures, and documents layout easily accessible for persons with dyslexia and other learning disabilities?*  Refer to WCAG guidelines requirements for cognitive accessibility. | Yes | It is recommended that the telehealth platform complies with WCAG cognitive accessibility guidelines to ensure active use by persons with learning disabilities. |
| R | 25 | Allocation of sufficient time to read and complete tasks | 25 | • *If and when required, does the telehealth platform allow users additional time to read and complete tasks?*  Refer to WCAG guidelines requirements for cognitive accessibility. | Yes | It is recommended that the telehealth platform complies with WCAG cognitive accessibility guidelines to ensure active use by persons with learning disabilities. |

Bibliography

[b-ITU-T F.791] Recommendation ITU-T F.791 (2018), *Accessibility terms and definitions*.

[b-ISO/IEC 20071-23] ISO/IEC 20071-23:2018, *Information technology – User interface component accessibility. Part 23: Visual presentation of audio information (including captions and subtitles)*. <<https://www.iso.org/standard/70722.html>>

[b-WHO ICF] World Health Organization (2017), *International classification of functioning, disability and health (ICF)*. <<https://apps.who.int/classifications/icfbrowser/>>

\_\_\_\_\_\_\_\_\_\_\_\_\_\_