

**Title:** Overview on Accessibility of Video Conferencing Apps and Services

**Purpose:** The purpose of this document is for United Nations staff and partners to make their video conferences as inclusive as possible for all persons with disabilities.

**Background:** The Stakeholder Group of Persons with Disabilities gathered the following information from representative organizations of persons with disabilities, in particular from the International Disability Alliance and its members, as well as other experts. This list is by no means exhaustive, but rather an attempt to provide an accessibility overview. Information is not listed in any order of priority.

**Introduction:** In contrast to in-person meetings, virtual meetings have the potential for increased participation of persons with disabilities from around the world with remote live captioning, sign language interpretation and other accessibility features in place. It is important to keep up to date with the quickly evolving changes in online platforms. Consequently, this document will be periodically updated to keep in line with new accessibility features, taking note that accessibility for underrepresented groups of persons with disabilities (e.g., persons with deafblindness) need to be addressed in more depth in future revisions.

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**I. General recommendations**

* Review online instructions offered by the platform for video layout options and any specific settings for sign language interpreters and captioners.
* Contact the platform’s technical support specialists or knowledge base.
* Work with IT departments on integrations or other solutions in consultation with representative organizations of persons with disabilities.
* Consider the possible support needed for those unfamiliar with a platform. People may need extra support to understand how to create an account, download the platform, connect to the meeting, or understand the controls. An easy-to-understand guide, video or a call with participants to explain the process may be useful.
* Access to online platforms poses real challenges for persons with deafblindness due to their dual sensory impairment. A professional interpreter-guide can be the key to access online platforms for many persons with deafblindness, although there are a variety of techniques and communication methods. It is important to provide proper training on the use of online platforms for the person with deafblindness as well as their interpreter-guide.

**Table:** A snapshot of accessibility features of the main video conferencing platforms

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Platforms** | **Signing participants visible** | **Sign language interpreter visible** | **Multi-pin videos** | **Captions can be added** | **Screen reader compatibility** | **Good for large meetings** | **Good for small meetings** | **Additional barriers** |
| **GoToMeeting** |  | ✓ |  | ✓ | ✓ | ✓ | ✓ | Keyboard shortcuts only work in Windows. |
| **Zoom** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Screen sharing is not accessible to screen reader users. |
| **Skype** | ✓ | ✓ |  | ✓ | ✓ |  | ✓ | Video quality is inconsistent. |
| **Skype for Business** | ✓ | ✓ |  | ✓ | ✓ |  | ✓ | Video quality is inconsistent. Not accessible for facilitators using screen readers. |
| **Microsoft Teams** | ✓ | ✓ |  | ✓ | ✓ |  | ✓ | Challenging when signed and spoken languages are used with large groups. Captions only in automatic speech recognition in English. |
| **Google Meet** | ✓ | ✓ |  | ✓ | ✓ |  | ✓ | Free for a limited time. |
| **WhatsApp** | ✓ | ✓ |  |  | ✓ |  | ✓ | Requires WiFi or 4G connection. |
| **Be.Live** | ✓ | ✓ |  |  |  |  | ✓ | Keyboard shortcuts only work in Windows. |
| **WebEx** | ✓ | ✓ |  | ✓ |  |  |  | Video quality is unclear, inconsistent and in a small window. |
| **Jitsi Meet** | ✓ | ✓ | ✓ (in a separate window) | ✓ | ✓ |  | ✓ | Requires high bandwidth. |

**II. Video Conferencing Apps and Services – advantages and disadvantages**

Below is an overview of the advantages and disadvantages in terms of accessibility of the main video conferencing apps and services.

**GoToMeeting -** [GoToMeeting accessibility page](https://support.goto.com/meeting/help/what-accessbility-features-are-available-in-gotomeeting)

Advantages

* Screen reader accessible[[1]](#endnote-1).
* It is an accessible platform for sign language users if no active participation is required, and sign language interpretation is provided.

Disadvantages

* Not accessible for facilitators using screen readers.
* When using a screen reader, the chat box function is distracting as every comment is read out.[[2]](#endnote-2)
* Live captioning needs to be ordered separately through a third-party service.
* A separate link is needed to stream captions/subtitles.
* It is not possible to see everyone at the same time to communicate in sign language.
* Keyboard shortcuts only work in Windows, but not iOS devices.[[3]](#endnote-3)

**Zoom -** [Zoom accessibility page](https://zoom.us/accessibility) and [Zoom accessibility FAQ](https://zoom.us/accessibility/faq)

Advantages

* Captions/subtitles can be embedded in the video in up to three lines, although some people may prefer to have a separate link to stream text.
* Everyone can see each other in small and large groups.
* Allows [pinning of up to 9 specific presenters](https://support.zoom.us/hc/en-us/articles/201362743-Pin-Video?mobile_site=true), which can include a sign language interpreter.
* A good option for an interactive meeting that requires output from sign language users.
* Works well for hard of hearing people if live captioning is provided.
* Works well for screen reader facilitators and users, except for reviewing something that another person is sharing from their screen.
* Zoom buttons are easier to understand and use since they are larger and have icons.
* Keyboard-only navigation enabled.
* Good audio and picture quality.
* Anyone with an invitation can join a Zoom call.
* Does not require a mobile or desktop app download for attendees. Users can use this platform through a web browser.
* Users can change their background, although this can sometimes wash out the presenter’s face.
* Supports up to 1000 participants at an extra cost.
* There is a chat messaging function.
* Can be broadcasted on Facebook or YouTube live.

Disadvantages

* Generally, there are more accessibility issues with the mobile version, including that it is not possible to change to grid view.
* Live captioning needs to be ordered separately through a third-party service.
* Closed captions must be enabled in settings before the meeting starts and appear with a delay on screen.
* There is no option to have either a few words or full sentence captions/subtitles on the screen.
* Automated captions are being developed (but this service should not be used to replace live captioning, due to lack of accuracy).
* In recordings, the captions/subtitles are not recorded if in a separate box.
* For screen reader users, it is difficult to review something that another person is sharing from their screen.
* For screen reader users there are some challenges with using the chat box. For example, the screen reader starts reading the chat, and then cannot access other functions, such as unmute, so delays participation.
* Without the assistance of an interpreter-guide, Zoom is not accessible to many persons with deafblindness, including barriers in accessing the Q&A function or chat boxes.
* If used, the password requirement can add another level of inaccessibility for some users.
* Currently, the UN Secretariat, similar to some governments, does not host Zoom due to security issues.

**Skype -** [Skype accessibility page](https://support.skype.com/en/skype/windows-desktop/everythingelse/accessibility/)

Advantages

* Screen reader compatible.
* Accessible for sign language users depending on video quality.
* Live captions are available on the desktop and mobile versions (for video, audio and traditional phone calls).
* Captions/subtitles are attributed to specific users.
* Users can blur their background for privacy.
* The platform can be accessed in the web browser.
* Anybody can join a call, even if they do not have a Skype account.
* Supports up to 50 call participants.
* There is a chat messaging function.

Disadvantages

* The platform does not remember preferences for captions/subtitles, so this must be enabled each time.
* Users must pay to use premium features like voice mail, SMS texts, making calls to a landline, or mobile phone outside of Skype.
* Video quality is inconsistent.

**Skype for Business[[4]](#endnote-4)**

#### Advantages

* Supports up to 250 call participants.
* Closed captions can be enabled in a Skype meeting broadcast.
* There is a chat messaging function.
* Users can blur their background for privacy.

#### Disadvantages

* Organizers must have a Skype for Business or Lync account through their organization, but participants can join as a guest.
* Not compatible with the consumer version of Skype.
* There can be difficulties logging in.
* Live captioning needs to be ordered separately through a third-party service.
* User interface is difficult to use.
* Users must download the desktop or mobile app.

**Microsoft Teams -** [Microsoft Teams accessibility page](https://support.office.com/en-us/article/accessibility-support-for-microsoft-teams-d12ee53f-d15f-445e-be8d-f0ba2c5ee68f)

Advantages

* Accessible for sign language users if a group of four people or less.
* There is the ability to pin one person.
* Live captions are available on desktop app and mobile, but only as a preview feature.
* Screen reader accessible.
* The platform has good picture, sound quality and is secure.
* External guests can join as long as they have a valid email address.
* There is a chat messaging function and it can be accessed within the web browser.
* Audio, video and screen-sharing activity can be recorded in Teams meetings.
* Automatic transcription allows users to playback the conversation and search within the transcript.
* Users can blur their background for privacy.
* Supports up to 250 call participants.

Disadvantages

* Live captioning is supported within the product only as automatic speech recognition (ASR) and in English, and not available in government clouds.
* Meetings in large groups are more difficult as the interface is not easy to function.
* Larger group meetings are challenging when signed and spoken languages are both being used.
* It is challenging to enlarge the video of a sign language interpreter.

**Google Meets -** [Google accessibility page](https://www.google.com/accessibility/products-features/)

Advantages

* Anyone with a Gmail account can join a Google Meets call.
* Screen reader compatible.[[5]](#endnote-5)
* This platform can be used in a web browser.
* There are keyboard shortcuts for video calls and within chat function.
* Has good picture and sound quality.
* Has a chat messaging function.
* Supports up to 25 call participants.
* Supports a sign language interpreter app.

Disadvantages

* Live captioning is supported within the product only as automatic speech recognition (ASR).
* Live captioning support for real-time transcription must be provided through a third-party service, using an app that can be added from the left margin of the video call interface.

**WebEx -** [WebEx accessibility page](https://help.webex.com/en-us/84har3/Cisco-Webex-Meetings-and-Cisco-Webex-Events-Accessibility-Features)

Advantages

* There is the ability to pin one person.
* A closed captioning feature exists.

Disadvantages

* Video quality is unclear, inconsistent and in small window.
* There are significant time lags when using the video.
* Difficult to use for deaf participants and sign language interpreters, as the pinning process is difficult, especially in larger groups.
* When using pinning, only small thumbnails of other participants can be seen.
* Not accessible for blind facilitators.
* Difficult to navigate for screen reader users, including logging in.
* The raise-hand function is not accessible for screen reader users.

**Be.Live**

Advantages

* A sign language interpreter can be viewed as a big screen on top of the three panelists for easy visibility.
* The video feed can be directly embedded into Facebook Live.
* Can be accessed via webpage or application.
* The streaming platform supports Facebook and YouTube.
* Can stream to two Facebook destinations simultaneously or stream to Facebook and YouTube at the same time.
* All broadcasts are saved in the destination where it went live, which works well for those in diverse time zones.
* The platform is easy to use and navigate.
* The comments from Facebook appear on the platform.
* It is affordable with an annual subscription fee of 144 USD for Lite and 240 USD for Standard. It has a 14-day free trial.

Disadvantages

* Some technical issues can arise, particularly microphones not working.
* A maximum of four video screens can be viewed.
* It requires everyone to sign into either Facebook or YouTube accounts.
* Presentations such as PowerPoints are very difficult to use with the platform.
* The platform does not have a way to download a standalone video.

**Jitsi Meet**

Advantages

* Captions/subtitles can be added.
* Screen reader compatible in Chrome.
* Multi-pinning is possible by using separate, additional windows.
* There is a chat messaging function.
* This is a free and open source.
* An account is not required to join a meeting.
* Password protection is provided.
* [You can livestream Jitsi meetings to Youtube](https://jitsi.org/blog/live-streaming-with-jitsi-and-youtube/).

Disadvantages

* Not good for large meetings.
* Requires high bandwidth.
* Supports up to 75 participants.
* Does not have built-in captions.
* Live captioning needs to be ordered separately through a third-party service.
* Screen reader challenges in browsers other than Chrome.

**Other platforms**

**Blackboard -** [Blackboard accessibility page](https://www.blackboard.com/blackboard-accessibility-commitment)

* Screen reader accessible.
* Blackboard integrates with Zoom.
* This platform is very expensive.

**Whereby**

* This is accessible for signing deaf users and sign language interpreters since many people can be viewed at the same time on the screen.

**Other Video Calling Services**

**WhatsApp**

Advantages

* Screen reader compatible.
* Accessible for sign language users via video calls, and can be used for groups.
* Offers the ability to send and receive audio messages.
* Large group chats can be set up.
* Offers voice calling as well as video calling, with group calls enabled.
* Available on iOS and Android.
* Can be used with low connectivity.
* Very familiar to many people, so would not require downloading a new platform or setting up a new account.

Disadvantages

* Presentations are not possible.
* Requires a WiFi or 4G connection.

**References**

Rooted in Rights: [How to Make Your Virtual Meetings and Events Accessible to the Disability Community](https://rootedinrights.org/how-to-make-your-virtual-meetings-and-events-accessible-to-the-disability-community/)

The Big Hack: [Best video conferencing apps and software for accessibility](https://bighack.org/best-videoconferencing-apps-and-software-for-accessibility/)

Women’s Major Group webinar series on online platforms and accessibility: (1) Methodology and accessibility [recording](https://www.youtube.com/watch?v=beiWoi3I7_E&feature=youtu.be) and (2) [presentation](https://docs.google.com/presentation/d/1oqZRMp8n72A_3nwNfHtRLaoKqr-gMxsFpyXMWnfMHYM/edit#slide=id.g830b8efab8_0_0) and Logistics [recording](https://www.youtube.com/watch?v=Jidn0_1oQyE) and [presentation](https://docs.google.com/presentation/d/1J1BJfczlng96Ft_K4sLzfqMPDLCF4SBjDdNuK7CjUIo/edit#slide=id.g7304c643b8_1_990)

**Additional resources**

CBM: [Digital Accessibility Toolkit](https://www.cbm.org/fileadmin/user_upload/Publications/CBM-Digital-Accessibility-Toolkit.pdf)

Deaf/Hard of Hearing Technology Rehabilitation Engineering Research Center: [Accessibility Tips for a Better Zoom/Virtual Meeting Experience](https://www.deafhhtech.org/rerc/accessible-virtual-meeting-tips/)

[Global Initiative for Inclusive ICTs (G3ict)](https://g3ict.org/)

# Hellerstein, J:[Are Your Virtual Meetings Accessible for People with Disabilities? Start with This Checklist](https://www.internetsociety.org/blog/2020/07/are-your-virtual-meetings-accessible-for-people-with-disabilities-start-with-this-checklist/)

Inclusion Europe: [Easy-to-read information about Coronavirus available in many languages](https://www.inclusion-europe.eu/easy-to-read-information-about-coronavirus/)

International Federation of Hard of Hearing People: [Accessibility during the Coronavirus](http://www.internationaldisabilityalliance.org/sites/default/files/accessibility_during_the_coronavirus_march_23_2020final.pdf) ([Word version here](http://www.internationaldisabilityalliance.org/sites/default/files/accessibility_during_the_coronavirus_march_23_2020final.docx))

International Foundation for Electoral Systems (IFES): [Holding Accessible and Inclusive Virtual Meetings](https://www.ifes.org/sites/default/files/inclusion_insights_holding_accessible_and_inclusive_virtual_meetings.pdf)

National Deaf Center: [What strategies are available for deafblind students using interpreters remotely?](https://mailchi.mp/nationaldeafcenter/your-questions-answered-deafblind-students-changing-accommodations?e=099b3f5266) and [COVID-19 information](https://www.nationaldeafcenter.org/covid-19-information)

National Deaf Center: [How to Host Effective and Accessible Online Meetings with Deaf Participants](https://mailchi.mp/nationaldeafcenter/accessible-online-meetings-with-deaf-participants?e=099b3f5266)

University of Washington: [Creating accessible videos](https://www.washington.edu/accessibility/videos/) and [Adding captions in Zoom](https://www.washington.edu/accessibility/videos/zoom/)

World Blind Union: [WBU calls for accessible and inclusive services on Corona Virus](http://www.worldblindunion.org/English/news/Pages/WBU-calls-for-accessible-and-inclusive-services-on-Corona-Virus.aspx?platform=hootsuite)

World Blind Union, the Global Initiative for Inclusive Information and Communication Technologies, and International Association of Accessibility Professionals Webinar [on How to Create and Evaluate Digital Documents](https://www.youtube.com/watch?v=3xFVckETdR0)

World Federation of the Deaf: [Guidelines on Providing Access to Public Health Information in National Sign Languages during the Coronavirus Pandemic](http://2tdzpf2t7hxmggqhq3njno1y.wpengine.netdna-cdn.com/wp-content/uploads/2020/03/WFD-WASLI-Guidelines-SL-access-FINAL-18March20.pdf)

World Federation of the Deafblind, European Deafblind Union, the African Federation of the Deafblind, the Latin American Federation of the Deafblind: [Recommendations on inclusive policies from the global deafblind community](http://www.internationaldisabilityalliance.org/sites/default/files/deafblind_joint_recommendation-covid19_07.04.20.docx)

1. It is important to note that, unlike GoToMeeting, GoToWebinar is very challenging for screen reader users since buttons are not properly labeled, particularly for the microphone. [↑](#endnote-ref-1)
2. A possible solution: the facilitator can ask participants to send questions to an email or WhatsApp group instead of using the chat box. [↑](#endnote-ref-2)
3. For details on keyboard shortcuts: <https://support.goto.com/meeting/help/use-keyboard-shortcuts-from-the-desktop-app-windows-only-g2m040026> [↑](#endnote-ref-3)
4. Skype for Business will be replaced by Microsoft Teams. Skype for Business will be retired on July 31, 2021, at which point it will no longer be accessible or supported. [↑](#endnote-ref-4)
5. For details on using Google Hangouts with a screen reader: <https://support.google.com/hangouts/answer/6320673?hl=en> [↑](#endnote-ref-5)