From **Resources** / Service design   8th April 2020

Best video conferencing apps and software for accessibility

By
The Big Hack and Business Disability Forum

Video calling apps can help maintain connection and community online, even if you're unable to in person. Here's an overview of the best video conferencing apps for accessibility.

Since the Covid-19 lockdown, there's been a huge spike in the use of video conferencing apps for work meetings and social hanging out. The signs suggest that this is going to continue even after restrictions ease. As a response, many have offered free versions of their premium tools to help people keep in touch. But with so many services available to help, it can be hard to know where to start. This is a guide to the features of the most commonly used apps.

Menu

Danny De Weerdt
@iDDW

In these times, it's important to teach deaf elderly people the possibilities of video conferencing with multiple friends. Here my brother @krikinr2 taking a picture of our deaf Dad socializing with his friends in Flemish Sign Language.

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2:35 AM · Mar 22, 2020   (i)

♡ 74   ○ 16 people are Tweeting about this

How accessible or usable an app is will depend on the person using it, their access requirements and of course the requirements of their work and employer when using them for work meetings.

Who this guide is for

People with access requirements

The nature of video calling means that it disproportionately affects people with sensory impairments like deafness or hearing loss. We hope this guide will be useful for deaf and hearing-impaired people who want to find the best video conferencing platform to work or socialise.

People with elderly relatives

It may also be useful for people wanting to keep in touch with elderly relatives more easily. Elderly people with hearing loss may benefit from live captions and other practical features like ease of setup.

Businesses and organisations

It may be useful to businesses who want to make their video conferences as inclusive as possible. Especially for students or colleagues who are deaf or hearing-impaired, though it's worth noting that captions benefit many people. They can provide a better experience for people with developmental disabilities like attention deficit hyperactivity disorder (ADHD) and autism. They can also improve understanding for non-native English speakers.

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Every person with access requirements will have their own individual needs. It's always better to ask what they would prefer instead of assuming.

What are Live Captions?

When we refer to live video captions throughout this guide, we mean automatically transcribed closed captions that appear on the screen as people talk. Also called subtitles, live subtitles, closed captions and automatic video captions.

As with any artificial intelligence (AI) technology, live captions have limitations. Often they are not perfect, and the quality varies according to the provider.

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> turn them on. Even for the tech giants, there is inconsistency as to which of their products have live captioning capabilities and which do not. We'd like to see more businesses sharing this technology and licensing it to others.

Gideon Hoffman

Live captions work best for one to one meetings or small group conversations. They will become less accurate if more people, voices and noise are added to the call. Automated caption technology often struggles to pick up strong accents and speech impairments too.

But they can be helpful for people who are hearing-impaired, deaf or elderly. They also help improve understanding for non-native English speakers.

Video conferencing apps and services

Most video apps offer similar basic features. Like a screen-sharing option to let other callers see what's on your computer, a mute button and instant messaging. But they differ in the access services they provide, like live closed captions. It's worth noting that although Artificial Intelligence has improved tremendously in recent years, AI-generated closed captions are still not as good as captions provide a human. Some platforms allow users to add captions created by a human transcriber.

Below you will find an overview of the main video conferencing services and the functionality they offer. Below is an alphabetical list of the most commonly used apps outlining their basic features and accessibility functions. Note, these apps are being updated with new features all the time.

If you are a developer or user or if you know of an update or change that needs to be added to the list, please do let us know. We've also tried to include a link to the suppliers' websites, so please also check these for any updated information on the accessibility features. If there's an app that's missing that should be in the list again let us know and we will add it.

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Thank you to our colleagues at **Business Disability Forum** for adding their research to this piece.

Blackboard

Blackboard is an online teaching and learning tool used by students and teachers. It enables online classroom learning with course materials, student and teacher interactions and assessments delivered online. It can facilitate real-time and recorded lectures and discussions and can be used for mentoring and tutoring.

Advantages

- Provides HTML content to view
- Multiple methods of communication
- Instructors are prompted to add alt text to images

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- Has the ability to add your own alt text to images

Disadvantages

- No speech-to-text function
- Does have live captions, you have to add them to your materials
- Users report that it is difficult to navigate

Accessibility Features in Blackboard

BlueJeans

BlueJeans is a cloud-based service that is able to connect users across multiple devices and utilize conferencing solutions including Google, Microsoft Lync and Cisco. The platform offers collaborative video, audio, and web conferencing as well as allowing users to host live streams and other interactive events.

It offers a free trial but afterwards requires an annual or pro subscription. BlueJeans Standard will likely be sufficient for most users, as it allows you to host up to 50 members per meeting, unlimited one-on-ones, unlimited group meetings without time limits, and five hours of recording times for the meetings you host.

BlueJeans Pro allows 75 members per meeting, 25 hours of recording time, as well as Command Center Analytics and security and workstream collaboration features not available on the Standard level.

Advantages

- BlueJeans sells itself on its simplicity allowing users to "schedule, join, and host one-touch meetings in just six seconds" from any device.
- Utilizes HD video and Dolby Voice audio, which offer superior quality.
- compatible with standard screen readers such as VoiceOver on iOS and OSX platforms, TalkBack on Android devices and NVDA (Non Visual Desktop Access) for Windows platform.
- Users can navigate using their keyboard and these assistive technologies to perform most of the functions to schedule, attend and participate in a BlueJeans meetings.
- Closed real time AI captions can be enabled

Disadvantages

- Turning on closed captions can be slow and there may be a delay
- Closed captions are not available after the meeting as a transcript
- Users must pay for transcription as an addon service

BlueJeans accessibility homepage

Google Hangouts

meeting, you need to be signed into a G Suite account. To join a video meeting as a guest, you need the Meet mobile app or a supported web browser. You do not need a G Suite account, but you must be invited by someone who does.

In response to lockdown, Google announced in May 2020 that they would be making premium features of Google Hangout free to individuals, including live captions.

Advantages

- Live AI close captions available on desktop and mobile
- Anyone with a Gmail account can join a Google Hangouts call
- Screenreader accessible
- Can be used in web browser
- Keyboard shortcuts for video calls and within chat function.
- Good picture and sound quality
- Chat messaging function
- Supports up to 25 call participants
- No limit on call time
- Noise minimisation feature focuses audio on the speaker's voice and not background noise

Disadvantages

- Non-Gmail addresses can only be added to the video meeting if the user who invites you has a G-suite account
- You do not have the option of adding your own caption provider to the call. If you do use a caption provider their captions will not show within Hangout, and you will need to view these via a different window/application

Sign up to Google Hangouts
How to start a video call in Google Hangouts
Suggested browsers for using Google Hangouts with a screen reader

Hangouts Meet by Google (Google Hangouts for Business)

The business version of consumer Google Hangouts, which requires at least one meeting member to sign up to G Suite. Hangouts Meet offers the highest quality live captions of all the providers on this list.

Google has recently made Hangouts Meet available to all G Suite customers for free. (Note, owning a Gmail account is not the same as being a G Suite customer, which a paid-for service).

G Suite offers a free 14-day trial which requires no software download. Package pricing starts at £4.14 per user per month for the Basic package, £8.28 per user per month for Business and £20 per user per month for Enterprise.

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Screenshot of Google Hangouts Meet video call with live captions.

Advantages

- High quality live captions available
- Widely reported as the highest quality AI closed caption provider among regular users
- Keyboard shortcuts for video calls and within chat function
- Screenreader accessible
- Integrates with both Microsoft Outlook and Gmail
- Simple, easy-to-use interface
- Can be used in web browser
- Customers can make use of full-page zoom magnifier, high-contrast colour, and accessibility extensions in Chrome browser
- Any user can mute anyone else on the call
- Supports up to 250 call participants
- Offers a free call-in number for those without video to join the call
- Censors swear words

Disadvantages

- At least one call participant must have a paid-for G Suite account
- Captions are only available in English
- If you record a video meeting, captions are not recorded and don't appear when you play the recording.

Sign up to G Suite
Sign up to Google Hangouts Meet
How to use captions in a Google Hangouts Meet video meeting
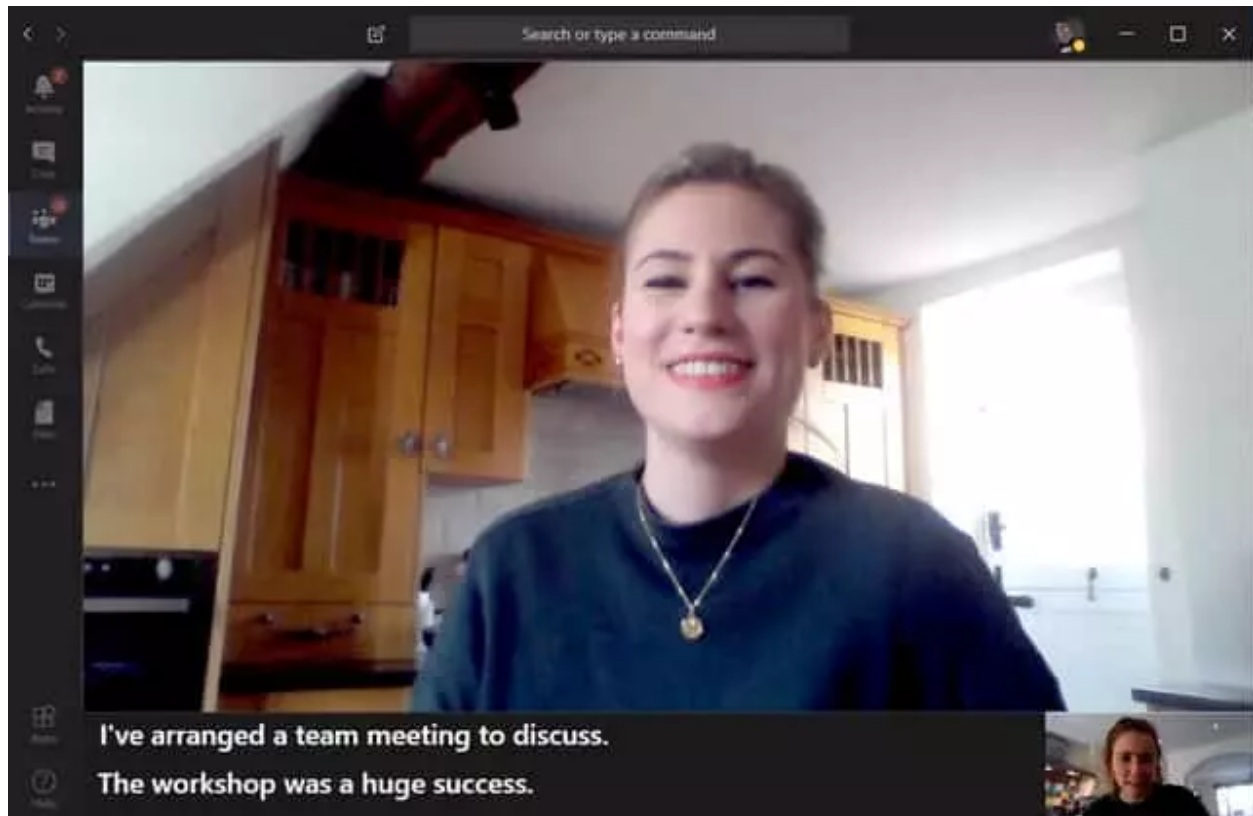**How to work from home with G Suite**

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Microsoft Teams

Launched in 2017, Teams is Microsoft's answer to rival platform Slack. The number of daily users has surged to 44 million during the coronavirus outbreak.

Teams is available to organisations who use Office 365, though Microsoft plan to launch a consumer version of Teams later in the year. Microsoft Teams will soon replace Skype for Business.

Advantages

- Live captions available on desktop app and mobile, but only as a preview feature. This means that not all companies who use Teams will have this functionality yet. Captions are not available in government clouds.
- Screenreader accessible
- Good picture and sound quality
- Simple user interface (UI)
- External guests can join as long as they have a valid business or consumer email address.
- Chat can be accessed within 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 or to remove distractions for those lip reading
- Supports up to 250 call participants
- Chat messaging function

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- Browser-based web app version doesn't support real-time calls or meetings
- Live captions only available in English
- You do not have the option of adding your own caption provider to the call, if you do, their captions will not show within Hangout, and you will need to view these in a different window or application
- Blur background function is disabled for some users and appears as "disabled by policies"

[How to setup Microsoft Teams](#)
[How to turn on live captions in a Teams meeting](#)
[How to start a video call from a chat in Teams](#)
[Phone numbers for Audio Conferencing in Microsoft Teams](#)
[Accessibility Overview of Microsoft Teams](#)

Skype

Free service which specialises in video chat and voice calls. Can be downloaded across a range of devices. Live captions and subtitles are available in Skype version 8 or higher for Android, iOS, Windows and macOS. Accessible through computer, mobile or tablet, with a Wi-Fi connection or mobile data plan.

You can also make a call from Skype to someone on their mobile or landline with a subscription or Skype Credit. Some premium-rate numbers, geographic or country-specific numbers are not supported by Skype.

Advantages

- Free
- Live AI closed captions available on desktop and mobile (for video, audio and traditional phone calls)
- Closed captions are attributed to specific users??
- Screen reader accessible
- Users can blur their background for privacy
- Censors swear words
- Can be accessed in web browser
- Anybody can join a call, even if they do not have a Skype account
- Skype to Skype calls are free anywhere in the world
- Supports up to 50 call participants
- Chat messaging function

Disadvantages

- Does not remember preferences for captions, so they must be switched on each time
- You do not have the option of adding your own caption provider to the call, if you do, their captions will not show within Hangout, and you will need to view these in a different window or application
- Users must pay to use premium features like voice mail, SMS texts, making calls to a landline, or mobile phone outside of Skype

[Sign up to Skype](#)
[How to Use Skype](#)

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Skype for Business

Integrates with Microsoft Outlook and Office 365 products. Closed captions can be viewed in Skype meeting broadcasts, but they must be enabled by the meeting organiser beforehand. Can be used on a computer, mobile or tablet, with a WiFi connection or mobile data plan.

Skype for Business is free to the user (organisations must be signed up and pay per user).

Advantages

- Supports up to 250 call participants
- Closed captions can be enabled in a Skype meeting broadcast
- Chat messaging function
- Users can blur their background for privacy and to enable lipreading without distractions

Disadvantages

- Users must have a Skype for Business or Lync account through their organisation
- Not compatible with the consumer version of Skype
- Live closed captioning not supported within the product
- Closed Caption support for real-time transcription must be provided through a third-party service or by typing yourself.
- User interface is difficult to use
- Users must download desktop or mobile app
- Charges call-in fees on top of per month per user fee

How to sign in to Skype for Business
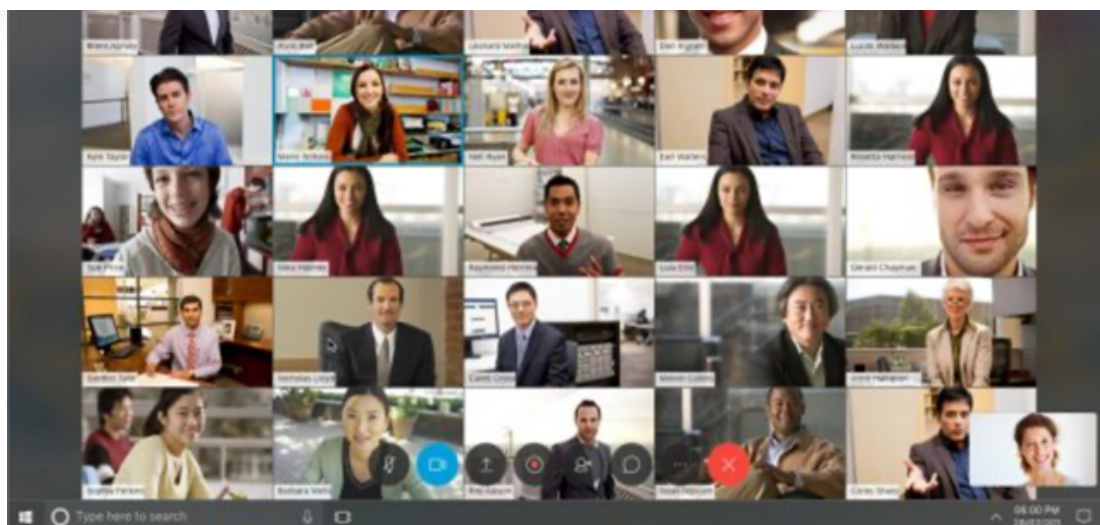How to set up closed captions in a Skype Meeting broadcast
Supported countries for dialling in to a Skype for Business meeting by phone

Webex Meetings

Webex Meetings is a full video and content-sharing cloud solution that you can join via desktop, mobile, browser, and video devices. WebEx allows users to host or participate in video conferencing, online meetings, and screen sharing, with up to 1,000 participants allowed in a virtual meeting room.

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Join meetings using the Webex desktop, web, and mobile apps. Webex offers a free trial but is afterwards a paid-for service.

Advantages

- Webex Meetings can automatically detect background noise to remove distractions.
- a single, consistent one-button join across devices and apps. Clicking on a green button in the invitation allows you to join.
- Nothing to install, plug in, or download to join from Chrome, Internet Explorer, Firefox, or Safari browsers.
- You can join or a start a meeting from Webex or do it from Slack, Microsoft Teams, and Workplace by Facebook. It also works with calendars like Google Calendar. Support for Microsoft Office 365 should be coming shortly
- It has been updated to work better on Mobile devices. Apple users can now use voice commands, Touch ID, and Face ID.
- Should minimize bandwidth issues such as latency, bandwidth, jitter, and packet-loss issues that happen so often on the public Web because it uses the Cisco network backbone
- Supports the high contrast scheme of the Windows OS.
- Supports the zoom functionality of the OS.
- Supports browser text resizing and zoom functionality.
- Possible to pin a video to see an interpreter
- The host can record the meeting and create a transcript

Disadvantages

- Limited keyboard navigation support
- Supports high contrast only with the Chrome high contrast extension
- Limited screen reader support but works with the latest version of JAWS
- No Live Captions available. Closed Caption support for real-time transcription must be provided through a third-party service

Accessibility overview of Webex

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Free, powerful video conferencing software. Particularly good for larger group meetings. Can be used on a computer, mobile or tablet, with a Wi-Fi connection or mobile data plan. Popular with people who require interpreters and speech-to-text reporters.

The basic package is free, Pro subscriptions range from £11.99 to £15.99 per month. Unlimited one-to-one video meeting calls with the basic, free package, with a 40-minute limit on group call times. For longer meetings, one meeting member must be signed up to the Pro subscription for £11.99 per month.

Advantages

- Accessible with a screen reader
- Keyboard-only navigation enabled
- Good audio quality
- Good picture quality
- Anyone can be invited to join a Zoom call
- Does not require a mobile or desktop app download for attendees. Users can use through a web browser.
- Users can change their background
- Supports up to 100 call participants
- Chat messaging function
- You can pin a speaker to your screen, so that you can keep an interpreter in view all the time
- Possible to phone into a Zoom meeting as well as joining with video

Disadvantages

- No Live Captions available. Closed Caption support for real-time transcription must be provided through a third-party service or by typing yourself. The process is complex and requires the user to copy Zoom's API token and then find another service.

- Closed captions must be enabled in meetings settings before meeting starts
- Concerns over data privacy and security which means that some businesses e.g. Government Departments do not allow the Zoom app to be downloaded onto work devices
- 40 minutes limit on hosting group video meetings (of 3 to 100 people) with the basic package
- User interface sometimes difficult to use
- Only the host can mute everyone
- Due to increased demand from Covid-19, dial-in by phone audio conferencing capabilities may be temporarily removed from free basic accounts.

Sign up to Zoom
How to get started with Zoom
Zoom video conference pricing
Supported countries for dialling into a Zoom meeting by phone
Zoom accessibility overview

Other video calling services

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Facebook Messenger

Anyone with a Facebook account, and a device with video and a microphone (like a smartphone, or laptop) can access to Facebook's video messaging service, with group calls enabled. Available on iOS and Android.

Facetime

Available on iOS only. Offers voice calling as well as video calling. Requires a Wi-Fi or 4G connection. Useful for people who want to sign with interpreters. Group calls enabled.

Whatsapp

Offers voice calling as well as video calling, with group calls enabled. Requires a Wi-Fi or 4G connection. Useful for people who want to sign with interpreters. Offers the ability to send and receive audio messages.

Available on iOS and Android.

Google Duo

Free to use, enables one-to-one video and voice calls and it works across both iOS and Android devices unlike Apple's FaceTime. Group calling limit is 12. Ability to send and receive video and audio messages. Google Duo seems to be preparing live caption functionality at the minute.

Workarounds to get live captions for video calls

There are some apps that will give you live transcriptions of what is being said around you. These apps can be used in conjunction with other video conferencing software and may work well in one-to-one video meetings or small group chats.

Live transcription apps and software

Some apps are limited in what they can transcribe. But the technology is always improving so it's worth checking for new apps and updating the ones you use.

- **Live Caption**, free, easy-to-use app which transcribes speech in real-time. Users can upgrade to Live Caption Unlimited to keep listening for longer than 60 seconds, without being interrupted for $2.99 per month. Available on iOS only.
- **Roger Voice**, basic free service which adds captions to voice calls in real-time when using the app. Users can upgrade to £5.49 per month subscription plan or unlimited package for £27.49 per month. Both packages allow calls to landline and mobile numbers but vary on the number of minutes offered. Available on iOS and Android.
- **Google Live Transcribe** for Android offers real-time transcription of speech and sound to t
- **Otter** focuses on meetings transcription but it also transcribes conversations. Available o

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Live caption by Google is an integrated feature on selected Android phones and the Google Pixel 4, 3a, 3 and 2 models. It transcribes everything it can hear, from speech to podcasts and videos.

Sound amplifiers

Some apps are available to help you hear what's happening around you more clearly. This might be by reducing background noise or boosting the sounds you want to hear.

- **Google Sound Amplifier** for Android only
- **HearYouNow personal amplifier** for iOS
- **uSound app** for iOS

You can find more technology advice in **Scope's guide to apps that make life more accessible**.

Tips for better video calls

Whether you're video calling for work, or to keep in touch with family, there are ways to get the most out of your video conferencing technology. Follow these tips to make your video meetings more accessible and inclusive.

Remove background noise
For example by turning off the radio, muting the television or going to a quiet room if there are others in the house.

When using live captions, speak clearly with a natural flow

It may seem intuitive to speak more slowly as you wait for the words to appear on the screen. But AI technology is generally trained to hear natural, flowing speech. This also depends on the provider.

And if one person on the call relies on live captions, it's a good idea to ask everyone to turn them on, too. If a person is speaking too quietly or too fast and can see that the captions are not appearing properly, they can see how to adjust their speech.

Use a good, external microphone if possible
The audio output is much higher than built-in microphones found in a computer or mobile. Using an external microphone will improve the sound quality for everyone else on the call.

Sit close to the microphone
This allows automated caption technology to pick up your words more clearly.

Make sure you have a good internet connection
This is important for high video and audio quality. Sit closer to the WiFi router, or consider purchasing a WiFi extender to improve your internet connection.

Headphones and headsets improve the sound quality for everyone
If all call participants can use headphones, the better the experience will be. Many new headphones have a built-in microphone too, which will make your audio output clearer.

Ask everyone to mute their mics when they are not speaking
This will help reduce unwanted noise.

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Digital phone services provide higher quality sound than phone networks
Even if your phone network signal is good, calls through WhatsApp, Facetime or Skype will generally offer higher quality audio.

This is because regular analogue phone calls compress the sound to a limited part of the audio spectrum. Digital calls compress sound differently, allowing you to hear everything in clearer detail.

Mobile 4G and 5G data is better than most home WiFis
The service tends to be better for video conferencing, but more expensive.

If sharing a presentation for work, **send the slides and speaker notes over before the call** so people can read along.

Further resources

Tips for meeting the video communication needs of patients who are deaf or have hearing loss (Action on Hearing Loss)
Technical tricks to make video conferencing work better from a home office (Blog post by Will Perrin)
Recommended Apps from Action on Hearing Loss
9 Useful apps for people who are Deaf or have hearing loss (AbilityNet)
Best tablet devices for elderly people to start video calling (The Guardian)
Coronavirus: How can we stay in virtual touch with older relatives? (BBC News)

Please note, we have included apps and software to support people with different access needs, but some apps might not be inclusive of all access needs.

We are not responsible for websites we link to and we do not endorse or accept liability for the apps used as examples.

Which services do you use? Let us know if you have any additional suggestions of your own in the comments.

You might also like

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Read Now

Understanding disability in a digital society | TechShare Pro 2020

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Contribute an article

The Big Hack is an open community, and if you have an idea, or an article, about how to make the digital world more inclusive, we want to hear from you.

Message us about a contribution

People are talking about this article:

Jesenia 5th June 2020

I couldn't refrain from commenting. Well written! Woah!
I'm really loving the template/theme of this site. It's simple, yet effective.
A lot of times it's challenging to get that "perfect balance" between user friendliness and visual appearance.
I must say that you've done a fantastic job with this.
Also, the blog loads super quick for me on Opera. Exceptional Blog!

I'll right away seize your rss feed as I can not
to find your e-mail subscription hyperlink or e-newsletter service.

Reply

Danna Skelton 10th June 2020

Good post. I will be facing some of these issues as well..

Reply

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THE BIG HACK

What "type-to-speech" applications are available for people who have difficulty speaking or being understood when calling with smartphone or video conference (App, tablet or PC)?

Reply

Hello 25th July 2020

Hey, thanks for the article. Really Great.

Reply

Zasper 25th July 2020

The above video conferencing app list seems to be good. Additionally, one can also use tools like on premise R-HUB HD video conferencing servers for conducting online video conferences. It provides 30 way HD video conferencing plus works on all platforms.

Reply

Helene Dore 31st July 2020

Hi I would really like the same information on GOTO Meeting and GOTO training to see how it compares, any advice on these platforms please

Reply

Helene Dore 31st July 2020

Hi I would really like the same information on GOTO Meeting and GOTO training to see how it compares, any advice on these platforms please

Reply

Facetime 23rd October 2020

The main benefits of Facetime are its video quality, its integration with Apple devices, and its ability to receive calls even if it is not running.

Reply

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