

Possible technological communication tools for hard of hearing and deaf people in virtual world

Due to the pandemic, many events are held online. It helps maintain the social distance, but at the same time, it has made communication difficult for many hard of hearing and deaf people. Are there any tools for creating an accessible environment online? Yes, to some extent, it's possible.

Members of IFHOHYP accessibility committee went through several articles, infographics and Facebook threads to find a solution for this question. Everything that we could find, we have collected in this table. Sadly, it's difficult to check them all, so you need to make a decision on your own, which of the proposed options suits you the best.

Some solutions are free, some solutions are paid. Please, consider this table only as a starting point for exploring available tools to self-help and creating accessible environment online.

All below is provided only for educational purposes.

title	description	link	
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Mobile messengers

Mobile messenger is a often free mobile messaging app used for instant messaging, sharing photos, videos, audio recordings and for group chats. The app, which is free to download, can be used to communicate with your friends and with your phone contacts. Using the messenger requires WiFi or mobile internet.

All of these apps work the same way, they just have different internals. These differences in technology are often interesting only to programmers but not to ordinary users. Their popularity also can depends on the country.

Many deaf and hard of hearing people prefer messengers instead of traditional SMS. We provide the links but highly recommend checking their existence in your national languages at google market and IOS.

<p><b>Facebook messenger</b></p>	<p>It's a separate app from Facebook which allows users to chat in text or voice form, send pictures, files and videos. The service also supports voice and video calling.</p> <p>Originally developed as Facebook Chat in 2008, the company revamped its messaging service in 2010. In April 2020, Facebook officially released Messenger for Desktop.</p>	<p>Android:  <a href="https://play.google.com/store/apps/details?id=com.facebook.orca">https://play.google.com/store/apps/details?id=com.facebook.orca</a></p> <p>IOS  <a href="https://apps.apple.com/app/messenger/id454638411">https://apps.apple.com/app/messenger/id454638411</a></p>	
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<p><b>Telegram</b></p>	<p>Telegram is an app which provides end-to-end encrypted calls and optional end-to-end encrypted "secret" chats between two online users on smartphone clients. Users can send text and voice messages, animated stickers, make voice and video calls, and share an unlimited number of images, documents, user locations, contacts, and music.</p> <p>It was initially launched for iOS on 14 August 2013 in Russia, and is currently based in Dubai. In some countries it's popular among journalists and people in PR field.</p>	<p>Android:  <a href="https://play.google.com/store/apps/details?id=org.telegram.messenger">https://play.google.com/store/apps/details?id=org.telegram.messenger</a></p> <p>IOS:  <a href="https://apps.apple.com/app/telegram-messenger/id686449807">https://apps.apple.com/app/telegram-messenger/id686449807</a></p>	
<p><b>WhatsApp</b></p>	<p>WhatsApp Messenger, or simply WhatsApp, is freeware, cross-platform messaging and Voice over IP (VoIP) service owned by Facebook, Inc.</p> <p>It allows users to send text messages and voice messages, make voice and video calls, and share images, documents, user locations, and other media.</p> <p><b>WhatsApp</b> exists in desktop form too.</p>	<p>Android:  <a href="https://play.google.com/store/apps/details?id=com.whatsapp">https://play.google.com/store/apps/details?id=com.whatsapp</a></p> <p>IOS:  <a href="https://apps.apple.com/app/whatsapp-messenger/id310633997">https://apps.apple.com/app/whatsapp-messenger/id310633997</a></p> <p>Desktop form -  <a href="https://web.whatsapp.com/">https://web.whatsapp.com/</a></p>	
<p><b>Wechat</b></p>	<p>It is a Chinese multi-purpose messaging, social media and mobile payment app developed by Tencent. There are users besides Chinese people.</p>	<p>Android:  <a href="https://play.google.com/store/apps/details?id=com.tencent.mm">https://play.google.com/store/apps/details?id=com.tencent.mm</a></p> <p>IOS:  <a href="https://apps.apple.com/us/app/wechat/id414478124">https://apps.apple.com/us/app/wechat/id414478124</a></p>	
<p><b>Viber</b></p>	<p>Viber is the free, simple, fast messaging app with video calling feature. Similar to WhatsApp. Popular in Philippines.</p>	<p>Android:  <a href="https://play.google.com/store/apps/details?id=com.viber.voip">https://play.google.com/store/apps/details?id=com.viber.voip</a></p> <p>IOS:  <a href="https://apps.apple.com/us/app/viber-messenger-chats-calls/id382617920">https://apps.apple.com/us/app/viber-messenger-chats-calls/id382617920</a></p>	

<b>Line</b>	Line is the free, simple, fast messaging app with video calling feature. Similar to WhatsApp and Viber. It's very popular in Thailand.	Android: <a href="https://play.google.com/store/apps/details?id=jp.naver.line.android">https://play.google.com/store/apps/details?id=jp.naver.line.android</a>  IOS: <a href="https://apps.apple.com/us/app/line/id443904275">https://apps.apple.com/us/app/line/id443904275</a>	
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Speech to text apps

Understanding another person, especially in noisy environment and group communication, has always been a problem for hard of hearing and deaf people. This struggle becomes very difficult with wearing masks, which covers the lips and mimics of speaker. Many researchers are thinking about this problem. Some solutions already exist. Although they are not 100% perfect, but they still exist.

- Always check conditions of use. For example, Say & Go Voice Notes and Inbox 4+ are paid apps. Or some programmers requires the installation.
- Speech to text apps helps to convert the voice to text. Please, pay attention, that many apps requires WI-FI or mobile phone to work. As it was tested, there is nothing that can be guaranteed by speaking 50 cm from the microphone.
- The same apps at notebook and at smartphone can shows different results. In the end, all depends on how strong the specific device is. As one of our members notes, you can consider these apps as hard of hearing robots which sometimes are better than HOH in the flesh.
- Google Live transcribe, Ava, Otter.ai are often mentioned as the best apps at current moment. Is this true, you decide and check for yourself. Anyway you can continue to search using the key words as "speech to text", "audio to text", "Voice-to-Text", "dictation apps"

<b>Ava</b>	<p>It is an app designed to empower people who are Deaf or hard-of-hearing by allowing them to follow conversations in real time on smartphones.</p> <p>An instant transcription app that transcribes in live the words of a group of people. Each participant installs the application on its smartphone and using the microphone the conversations are transcribed. This allows people who are deaf or hard of hearing to distinctly follow a conversation within a group without having to lip-read.</p>	Android: <a href="https://play.google.com/store/apps/details?id=com.transcense.ava_beta&amp;hl">https://play.google.com/store/apps/details?id=com.transcense.ava_beta&amp;hl</a>  IOS: <a href="https://apps.apple.com/us/app/ava-best-live-captions/id1030067058">https://apps.apple.com/us/app/ava-best-live-captions/id1030067058</a>  Website:	
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	CPU version works.	<a href="http://www.ava.me">www.ava.me</a>	
Google Live transcribe	<p>Apps that help to turn speech into text in real time on smartphone. The most important thing that apps works for 50+ languages too.</p> <p>Some smartphones – Samsung, for example, - has this apps already installed. Just check the section “special abilities” in the manual for your smartphone.</p>	<p>Android:  <a href="https://play.google.com/store/apps/details?id=com.google.audio.hearing.visualization.accessibility.scribe">https://play.google.com/store/apps/details?id=com.google.audio.hearing.visualization.accessibility.scribe</a></p>	
Otter.ai	<p>Its software shows captions for live speakers, and generates written transcriptions of the speeches. 600 minutes free every month for now. Otter on Android and iOS are exactly the same.</p> <p>As we know for now, English only.</p>	<p>Android:  <a href="https://play.google.com/store/apps/details?id=com.aisense.otter&amp;hl=ru&amp;gl=US">https://play.google.com/store/apps/details?id=com.aisense.otter&amp;hl=ru&amp;gl=US</a>  IOS:  <a href="https://apps.apple.com/us/app/otter-voice-meeting-notes/id1276437113">https://apps.apple.com/us/app/otter-voice-meeting-notes/id1276437113</a>  Website:  <a href="https://otter.ai/login">https://otter.ai/login</a></p>	
App MyEar	It's is a speech to text app developed by Gerald Isobe, deaf hall-of-fame golfer and his son, Brandon.	<p>IOS:  <a href="https://apps.apple.com/us/app/app-myear/id1299527104">https://apps.apple.com/us/app/app-myear/id1299527104</a></p>	
Dragon Dictation	It's the speech recognition application for Apple's iOS platforms, including iPhone, iPod Touch and iPad. The app provided automatic speech-to-text capabilities.	<p>IOS:  <a href="https://apps.apple.com/us/app/dragon-anywhere-dictate-now/id1024652126">https://apps.apple.com/us/app/dragon-anywhere-dictate-now/id1024652126</a></p>	
Speech To Text	This app is considered as a simple one to use for dictating text. They can be sent as an SMS or Email or copied and pasted into another app.	<p>Android:  <a href="https://play.google.com/store/apps/details?id=appinventor.ai_xenom_apps.SpeechToText">https://play.google.com/store/apps/details?id=appinventor.ai_xenom_apps.SpeechToText</a></p>	
HearClear	It is built to be the app for the Deaf and hard of hearing to make video and audio calls, and SEE the words being spoken. It is considered as FaceTime with live subtitles, the app allows users to access sound, subtitles, speech reading and sign to support them in making telephone calls	<p>IOS:  <a href="https://apps.apple.com/jm/app/hear-clear/id1424881188">https://apps.apple.com/jm/app/hear-clear/id1424881188</a>  Website:  <a href="https://hearclearapp.com/">https://hearclearapp.com/</a></p>	

Hearing Helper	Hearing Helper is specifically designed for anyone trying to talk with HoH (Hard of Hearing), Deaf, or ESL (English as a Second Language) friends and family. Push and hold the mic to translate speech-to-text with Apple's Siri technology.	IOS: <a href="https://apps.apple.com/us/app/hearing-helper-live-captions/id1391454121">https://apps.apple.com/us/app/hearing-helper-live-captions/id1391454121</a>	
Listen all	It is a free application capable of recognizing speech and transcribing it into text. it also recognizes the voice of audio messages. In English and Spanish. IOS app testing results: it's rather good.	IOS: <a href="https://apps.apple.com/us/app/listen-all/id1440471831">https://apps.apple.com/us/app/listen-all/id1440471831</a>	
TextHear	It's real-time speech-to-text apps. It is promised, that it adds automatic punctuation & spacing to aid comprehension.	Android: <a href="https://play.google.com/store/apps/details?id=co.speechnotes.speechnotes">https://play.google.com/store/apps/details?id=co.speechnotes.speechnotes</a> IOS: <a href="https://apps.apple.com/il/app/texthear/id1246677907?mt=8">https://apps.apple.com/il/app/texthear/id1246677907?mt=8</a> Website: <a href="https://texthear.com/">https://texthear.com/</a>	
Transcribe - Speech to Text	It's apps transcribing videos and voice memos into text.	IOS: <a href="https://apps.apple.com/us/app/transcribe-speech-to-text/id1241342461">https://apps.apple.com/us/app/transcribe-speech-to-text/id1241342461</a>	
Speechnotes - Speech To Text Notepad	it's multilingual dictate-to-speech apps. It's said that it supports 120+ languages and dialects.	Android: <a href="https://play.google.com/store/apps/details?id=co.speechnotes.speechnotes">https://play.google.com/store/apps/details?id=co.speechnotes.speechnotes</a> Website: <a href="https://speechnotes.co/">https://speechnotes.co/</a>	
Voice Notes	it's dictate-to-speech apps.	Android: <a href="https://play.google.com/store/apps/details?id=com.SouthernPacificOceanFisher.VoiceToText_memo&amp;hl=en_US">https://play.google.com/store/apps/details?id=com.SouthernPacificOceanFisher.VoiceToText_memo&amp;hl=en_US</a>	

Voice to Text Pro	Voice to Text use the google recognition voice service for write your documents while dictates. IOS app testing results shows that it's rather good.	Android: <a href="https://play.google.com/store/apps/details?id=com.josejoaquin.voicetotextpro">https://play.google.com/store/apps/details?id=com.josejoaquin.voicetotextpro</a>  IOS: <a href="https://apps.apple.com/us/app/voice-to-text-pro/id1206992685">https://apps.apple.com/us/app/voice-to-text-pro/id1206992685</a>	
Apple TV app	Change the closed captions or language for films and TV programmes in the Apple TV app	IOS instruction in global: <a href="https://support.apple.com/en-gb/HT202641">https://support.apple.com/en-gb/HT202641</a>	
Speech to text website			
Some speech-to-text apps work at smartphone. In the same time, some speech-to- text programmes work only on computers or work both ways. It's up to you, but we recommend to test the Webcaptioner first.			
Microsoft Transcribe	Programme that help to turn speech into text in different languages. It converts speech (recorded directly in Word or from an uploaded audio file) to a text transcript with each speaker individually separated.	Instruction: <a href="https://support.microsoft.com/en-us/office/transcribe-your-recordings-7fc2efec-245e-45f0-b053-2a97531ecf57">https://support.microsoft.com/en-us/office/transcribe-your-recordings-7fc2efec-245e-45f0-b053-2a97531ecf57</a>  Programme: <a href="https://www.microsoft.com/en-us/p/express-scribe-transcription-free/9ncdrbfp2kq1?activetab=pivot:overviewtab">https://www.microsoft.com/en-us/p/express-scribe-transcription-free/9ncdrbfp2kq1?activetab=pivot:overviewtab</a>	
Voice	Dictation transcribes your speech to text in real time. You can add paragraphs, punctuation marks, and even smileys using voice commands in Google Chrome. It's multilingual.	Website: <a href="https://dictation.io/">https://dictation.io/</a>	
Speech to Text	The IBM Watson Speech to Text service uses speech recognition capabilities to convert Arabic, English, Spanish, French, Brazilian Portuguese, Japanese, Korean, German, and Mandarin speech into text.	Website: <a href="https://speech-to-text-demo.ng.bluemix.net/">https://speech-to-text-demo.ng.bluemix.net/</a>	

Webcaptioner	It's free, real-time captioning for your event. And it's multilingual. You can attach a microphone to computer with internet and speak at offline event too.	Website: <a href="https://webcaptioner.com/">https://webcaptioner.com/</a>	
Captions during virtual meetings and subtitles			
One of the most difficult things for HOH and d\Deaf people is to follow what was said at screen. Some programmes for virtual meetings provide the possibility to turn on captions during meetings or to integrate with automated Speech Recognition (ASR).			
Please, pay attention, that in most cases, only the organizer of an online event can enable the captions for virtual meetings. It means that you may need to check the meeting format and contact the organizer of an online event in advance.			
Google meet	Google meet provides captions for virtual meeting, a video call. In English only.	Instruction:  <a href="https://support.google.com/meet/answer/9300310?co=GENIE.Platform%3DDesktop&amp;hl=en">https://support.google.com/meet/answer/9300310?co=GENIE.Platform%3DDesktop&amp;hl=en</a>	
Microsoft Teams	It is a persistent chat-based collaboration platform complete with document sharing, online meetings. Many universities use it.	Instruction: <a href="https://support.microsoft.com/en-us/office/use-live-captions-in-a-teams-meeting-4be2d304-f675-4b57-8347-cbd000a21260#ID0EABAAA=Desktop">https://support.microsoft.com/en-us/office/use-live-captions-in-a-teams-meeting-4be2d304-f675-4b57-8347-cbd000a21260#ID0EABAAA=Desktop</a>  Instruction: <a href="https://ucstatus.com/2019/12/13/microsoft-teams-live-captioning-in-meetings/">https://ucstatus.com/2019/12/13/microsoft-teams-live-captioning-in-meetings/</a>	
Skype	It is a telecommunications application that specializes in providing video chat and voice calls between computers, tablets, mobile devices, the Xbox One console, and smartwatches over the Internet.	Instruction:  <a href="https://support.skype.com/en/fag/FA34877/how-do-i-turn-live-captions-subtitles-on-during-a-skype-call">https://support.skype.com/en/fag/FA34877/how-do-i-turn-live-captions-subtitles-on-during-a-skype-call</a>	
Subtitle Viewer	It allows you to download and view subtitles on your android phone. You can use it while watching TV or a movie at the cinema.	Website: <a href="http://www.subtitleviewer.com/">http://www.subtitleviewer.com/</a>	

Zoom	It provides videotelephony and online chat services through a cloud-based peer-to-peer software platform and is used for teleconferencing, telecommuting, distance education, and social relations.	Official Instruction: <a href="https://support.zoom.us/hc/en-us/articles/207279736-Managing-and-viewing-closed-captioning">https://support.zoom.us/hc/en-us/articles/207279736-Managing-and-viewing-closed-captioning</a>  Using Google Slides to caption a Zoom meeting: <a href="https://www.youtube.com/watch?v=BDctedZ_Xdk&amp;feature=youtu.be">https://www.youtube.com/watch?v=BDctedZ_Xdk&amp;feature=youtu.be</a>	
Webcaptioner	It's free, real-time captioning for your event. And it's multilingual.	Instruction about integrations with different programmes: <a href="https://webcaptioner.com/help">https://webcaptioner.com/help</a>	
Speech to text \ Sign language by people and back			
<p>There are different ways and requirements for interpretation. Since apps are not accurate or do not have the required language, people interpret the speech into text or Sign language manually. Sometimes all that remains is to invite such a specialist. HOH and D\deaf invite them for online and offline events. Such specialists participate in online events either as one of participants showing in the window or use tools to provide their service remotely.</p> <p>So, what you need to know about them to access or begin to fight for the existence of such things in your country. Let's us repeat again, please, consider this table only as a starting point for exploring available tools to self-help and creating accessible environment online.</p>			
CART (commonly used in North America)/ Palantyping (commonly used in the UK)	Term means the same thing for real-time word for word captioning.  CART is an abbreviation for Communication Access Realtime Translation. It can be combined with PowerPoint or other presentation content—enabling people to view all content on one screen.	Explanations: <a href="https://www.hearingloss.org/hearing-help/technology/cartcaptioning/">https://www.hearingloss.org/hearing-help/technology/cartcaptioning/</a>  Facebook group: <a href="https://www.facebook.com/groups/STTCART/">https://www.facebook.com/groups/STTCART/</a>	
C-Print (Computerized Speech-to-Print	C-Print is a speech to text captioning technology and service developed by Dr. Michael Stinson at NTID, a college of RIT. This service is used in	Explanations:	

Transcription System)	classes and other settings. It can also be used with those who are partially blind or have learning differences. A trained operator, a C-Print captionist, produces a text display of the spoken information and provides as much information as possible in grammatically correct written language.	<a href="https://www.rit.edu/ntid/cprint/sites/rit.edu.ntid.cprint/files//pubs/pub_1mp%20%20Manual%20PDF_99.pdf">https://www.rit.edu/ntid/cprint/sites/rit.edu.ntid.cprint/files//pubs/pub_1mp%20%20Manual%20PDF_99.pdf</a>	
Stenography	General term to describe the technology that enables real-time captioning, primarily used in English language. There are also softwares developed in French, German, Italian, Chinese and Korean	Companies that make those technologies are Stenograph <a href="https://www.stenograph.com/">https://www.stenograph.com/</a> and Advantage Software <a href="https://www.eclipsecat.com/">https://www.eclipsecat.com/</a>	
STTI interpreters	People who also work as sign language interpreters will receive training to do C-Print or Velotype. STTI goes for speech-to-text interpreting.	Website: <a href="https://www.schreibernet.com/site.nsf/1/index.htm">https://www.schreibernet.com/site.nsf/1/index.htm</a>	
Streamcast	A software that enables remote captioning, can translate to different languages using Google translate.	Website: <a href="https://streamcast.com.au/">https://streamcast.com.au/</a>	
Velotype	It's similar to C-Print, but commonly used in Europe for European language (e.g., Danish, Dutch, Swedish)	Website: <a href="https://www.velotype.com/en/">https://www.velotype.com/en/</a> Video explanation: <a href="https://www.youtube.com/watch?v=8dNI2318aY4&amp;feature=youtu.be">https://www.youtube.com/watch?v=8dNI2318aY4&amp;feature=youtu.be</a>	

#### Phone calls

There are different ways to provide the possibility for HOH and D\deaf to use the phone and make the call. But we need to warn you, that most of them are only for USA. But We still put them into list for several reasons:

- USA people should know it too
- feel inspired that such things exist
- provide you info what for you should fight in your countries

Caption Call	CaptionCall phone helps to read and hear phone conversations. It works just like a regular landline phone with the advantage of real-time captions.	Website: <a href="https://captioncall.com/">https://captioncall.com/</a>	
ClearCaptions	It's caption telephone provider by the Federal Communications commission (FCC). Their captioning service is paid for through Title IV of the Americans with Disabilities Act (ADA), a fund which established the	Website: <a href="https://clearcaptions.com/">https://clearcaptions.com/</a>	

	Telecommunications Relay Service. There is no cost to qualified individuals whose hearing loss inhibits their phone use.		
Hamilton CapTel	<p>The Hamilton CapTel® App is designed exclusively for individuals who have difficulty hearing over the telephone. With this app, you may listen to your phone conversations while reading word-for-word captions of what's said to you - similar to captions on TV.</p> <p>English \ Spanish</p>	<p>Android:</p> <p><a href="https://play.google.com/store/apps/details?id=com.hamilton.ui">https://play.google.com/store/apps/details?id=com.hamilton.ui</a></p> <p>IOS in future:</p> <p><a href="https://hamiltoncaptel.com/apps/index.html">https://hamiltoncaptel.com/apps/index.html</a></p> <p>Website:</p> <p><a href="https://hamiltoncaptel.com/account/call-me-number.html">https://hamiltoncaptel.com/account/call-me-number.html</a></p>	
InnoCaption	<p>InnoCaption is the mobile app that offers real-time captioning of phone calls through live stenographers and automated speech recognition software.</p> <p>InnoCaption provides closed captioning of phone conversations at no cost to you, as it is funded by the FCC's Telecommunications Relay Services Fund.</p> <p>Their technology makes phone calls easy and accessible for the deaf and hard of hearing community!</p>	<p>Android:</p> <p><a href="https://play.google.com/store/apps/details?id=com.innocaption.vpdp">https://play.google.com/store/apps/details?id=com.innocaption.vpdp</a></p> <p>Website:</p> <p><a href="https://innocaption.com/">https://innocaption.com/</a></p>	
Roger Voice	<p>The first is the live transcription of telephone conversations in more than 100 languages as well as the possibility of answering by voice synthesis.</p> <p>The application goes further by offering to make calls thanks to the help of qualified LSF Interpreters graduates and Graduated LPC coders (in France only). A free version offers up to one hour of call by video interpreter assistance.</p>	<p>Android:</p> <p><a href="https://play.google.com/store/apps/details?id=com.rogervoice.app&amp;">https://play.google.com/store/apps/details?id=com.rogervoice.app&amp;</a></p> <p>Website:</p> <p><a href="https://rogervoice.com/en/">https://rogervoice.com/en/</a></p>	
Sprint Web CapTel	It's is a web-based service for users to read word-for-word captions of their phone calls on a computer monitor, laptop or tablet. It works	<p>Website:</p> <p><a href="https://sprintcaptel.com/products/webcaptel">https://sprintcaptel.com/products/webcaptel</a></p>	

	with any telephone (landline, office phone, cordless phone, mobile phone) and a computer.  Available in English and Spanish.		
<b>Apps for hearing aids (HA)</b>			
Some companies create apps which helps users of hearing aids to control them via smartphone. If it's useful or not, you decide yourself. Please, pay attention, that some of them are compatible only with specific technological brands. Discuss with your specialist first.			
Oticon ON	The Oticon ON App provides discreet remote control of your hearing aids, letting you adjust the volume of your hearing aids independently, switch between listening programs, keep an eye on your battery level or even help you find your hearing aids if you lose them.	Android: <a href="https://play.google.com/store/apps/details?id=com.oticon.remotecontrol">https://play.google.com/store/apps/details?id=com.oticon.remotecontrol</a>  IOS: <a href="https://apps.apple.com/us/app/oticon-on/id980191174">https://apps.apple.com/us/app/oticon-on/id980191174</a>	
Oticon ConnectLine	The app combines remote control features for Oticon Hearing Instruments with an intuitive visual interface to the ConnectLine system, which connects users wirelessly to Mobile Phones, Remote microphones, TV sound transmitters etc.	IOS: <a href="https://apps.apple.com/us/app/oticon-connectline/id815526991">https://apps.apple.com/us/app/oticon-connectline/id815526991</a>	
Phonak Tinnitus Balance	The Phonak Tinnitus Balance app helps you manage your PTM sound plan. You can select sounds from your SmartPhone's music library or there is a list of default sounds. This app is intended to be part of a personalized tinnitus management program provided by a hearing care professional familiar with the diagnosis and management of tinnitus.	Android: <a href="https://play.google.com/store/apps/details?id=com.phonak.tinnitus">https://play.google.com/store/apps/details?id=com.phonak.tinnitus</a>	
ReSound Control	With the Phone Clip+, ReSound Control lets you use your mobile device for easy overview and remote control of your ReSound wireless hearing aids and ReSound Unite wireless accessories.	Android: <a href="https://play.google.com/store/apps/details?id=com.gnresound.remotecontrol">https://play.google.com/store/apps/details?id=com.gnresound.remotecontrol</a>	
TouchControl Signia	The app will only provide all the functions if configured by your hearing health specialist. The app is only compatible with the latest generation of Signia/Siemens 7bx, 5bx, 3bx, Orion 2, Sirion 2, Teneo and Teneo+ hearing aids.	Android: <a href="https://play.google.com/store/apps/details?id=com.hearing.healthcare.siemens.touchcontrol">https://play.google.com/store/apps/details?id=com.hearing.healthcare.siemens.touchcontrol</a>	
myPhonak	The myPhonak app offers you a remote control functionality which allows you to adjust not only the volume and program but other advanced hearing aid settings such as noise reduction and microphone directionality. You can also have access to the Enhanced Speech Focus* slider, which allows you to change the strength of the new noise canceller	Android:  <a href="https://apps.apple.com/us/app/myphonak/id1332662924">https://apps.apple.com/us/app/myphonak/id1332662924</a>	

myCall-to-Text myPhonak	The Phonak myCall-to-Text app writes out what the person on the other end of the phone says, in real time. Communicate with anyone, anytime, anywhere and without worrying about missing out on the conversation.	IOS: <a href="https://apps.apple.com/us/app/mycall-to-text/id1413439369">https://apps.apple.com/us/app/mycall-to-text/id1413439369</a>	
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Sound loudness measurement

For some reason, you may need to measure sound loudness around you. Sometimes it's important while making the HA setting or adapting to them.

Sound Meter	Sound level meter(or SPL) app is shows a decibel values by measure the environmental noise, displays measured dB values in various forms.	Android: <a href="https://play.google.com/store/apps/details?id=com.gamebasic.decibel&amp;hl=en_GB">https://play.google.com/store/apps/details?id=com.gamebasic.decibel&amp;hl=en_GB</a>	
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Decibel X	It is one of very few noise meter apps on the market that has highly reliable, pre-calibrated measurements and supports dBA, dBC.	Android: <a href="https://play.google.com/store/apps/details?id=com.skypaw.decibel10pro&amp;hl=en">https://play.google.com/store/apps/details?id=com.skypaw.decibel10pro&amp;hl=en</a>  IOS: <a href="https://apps.apple.com/app/decibel-10th-pro-noise-meter/id448155923">https://apps.apple.com/app/decibel-10th-pro-noise-meter/id448155923</a>  Website: <a href="http://skypaw.com/decibel10.html">http://skypaw.com/decibel10.html</a>	
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"catalog / inventory of accessible apps"

Sey as memembr of Accessibility committee studies this question and come to a conclusion:

“Just modify with the equalizers, use hacks like connecting wireless devices via bluetooth, all this is the key, the apps will remain the same because it depends more on distance and pronunciation than on the programming of an app. So the key is that there is no noise, not even hearing aids and cochlear implants can work with noise, nor can listeners pick up an entire message in very noisy places. That as far as I have researched with data and experimenting with apps”.

Chatable	It's promised that Chatable boosts the volume of voice and removes background noise, enhancing your ability to hear speech amongst everyday background noise. Not always work perfectly.	Android: <a href="https://play.google.com/store/apps/details?id=com.hearingaid.volumebooster&amp;hl=US">https://play.google.com/store/apps/details?id=com.hearingaid.volumebooster&amp;hl=US</a>	
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			<p>IOS:  <a href="https://apps.apple.com/GB/app/id1494968908?mt=8">https://apps.apple.com/GB/app/id1494968908?mt=8</a></p> <p>Website:  <a href="https://chatableapps.com/">https://chatableapps.com/</a></p>	
HearMax Super Hearing Aid Amplifier	<p>This app works as FM system to some extent.</p> <p>The hearing aid features of HearMax Super Hearing Aid Amplifier make it possible to amplify sound by placing your phone near sound sources. Use this super hearing aid app and hearing amplifier to amplify and boost sound from devices and gadgets such as Television (TV), Radio, Speaker, Laptop, etc.</p>		<p>Android:  <a href="https://play.google.com/store/apps/details?id=com.ronasoftstudios.hear_max&amp;">https://play.google.com/store/apps/details?id=com.ronasoftstudios.hear_max&amp;</a></p>	
Sound Amplifier	<p>It helps to filter, augment, and amplify the sounds in your environment or on your Android device.</p>		<p>Android:  <a href="https://play.google.com/store/apps/details?id=com.google.android.accessibility.soundamplifier&amp;ah=uYOUXV60_Wdpi_HDtHsFt1TqxU4">https://play.google.com/store/apps/details?id=com.google.android.accessibility.soundamplifier&amp;ah=uYOUXV60_Wdpi_HDtHsFt1TqxU4</a></p> <p>IOS:  <a href="https://apps.apple.com/us/app/hearing-aid-sound-amplifier/id1367769102">https://apps.apple.com/us/app/hearing-aid-sound-amplifier/id1367769102</a></p>	
<b>Type apps</b>				
For some reason, it may requires to communicate in written way. We included the type apps into this list. You can look for national variants in google or Apple market.				
BuzzCards	<p>BuzzCards is an app designed to help deaf people communicate easily with people who don't know sign language. You can write and save cards with the messages you use the most.</p>		<p>Android:  <a href="https://play.google.com/store/apps/details?id=com.sorenson.buzzcards&amp;hl=en">https://play.google.com/store/apps/details?id=com.sorenson.buzzcards&amp;hl=en</a></p> <p>IOS:  <a href="https://apps.apple.com/us/app/sorenson-buzzcards/id380582593">https://apps.apple.com/us/app/sorenson-buzzcards/id380582593</a></p>	
Cardzilla	<p>Apps which allows you to display your messages in large text.</p>		<p>IOS:</p>	

			<a href="https://apps.apple.com/ru/app/cardz-illa/id623346823">https://apps.apple.com/ru/app/cardz-illa/id623346823</a>	
Glossary for Sign language				
Sign language are independent languages that use the visual-manual modality to convey meaning. They requires long-term language acquisition as any oral language. But apps can be useful for you to start.				
Spread Signs	World's largest sign language dictionary with over 400 000 signs! Just use the search box above and type the word you would like search for. The site is administered by the non-profit association European Sign Language Centre		Android: <a href="https://play.google.com/store/apps/details?id=com.spreadthesign.androidapp_paid">https://play.google.com/store/apps/details?id=com.spreadthesign.androidapp_paid</a>  IOS: <a href="https://apps.apple.com/us/app/spread-the-sign-language/id438811366">https://apps.apple.com/us/app/spread-the-sign-language/id438811366</a>  Website: <a href="https://www.spreadthesign.com/ru.ru/search/">https://www.spreadthesign.com/ru.ru/search/</a>	