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WORLD FEDERATION OF THE DEAF

An International Non-Governmental Organisation in official liaison with ECOSOC, UNESCO, ILO, WHO and the Council of Europe. WFD was established in Rome in 1951.

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WFD Position Paper on Accessibility:

Sign Language Interpreting and translation and technological developments

Approved by WFD Board on 7 February 2019

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1. KEY POINTS

- Deaf sign language users have the right to access information and interactions through professionally qualified sign language interpreters and translators.
- The professional sign language interpreting and translation profession has evolved significantly over the years.
- There is still a lack of consistency worldwide in the provision of sign language interpreting and translation.
- The advent of technology is having a significant impact on the way that sign language interpreters and translators work.
- The shape of the sign language interpreting and translation profession will look different in the future due to further technological developments.
- The provision and development of sign language interpreting and translation services should be done in close consultation with national associations of the deaf and national professional interpreting associations.

2. INTRODUCTION

A sign language interpreter or translator works with spoken or written languages; they provide interpreting or translating services between different languages, regardless of their modality being signed or spoken. The interpreting and translating profession has seen rapid development during the last decades. Concurrently global technological developments are moving fast and having a significant impact on the profession. This position paper provides a global review of the status quo of the sign language interpreting and translating profession specifically in relation to the latest technological developments, such as in TV/media, remote interpreting, and translation¹.

Historically sign language interpreting has taken place in face-to-face situations. Traditionally this was typically between persons who are deaf and use a signed language and those who can hear and use a spoken language. Interpreters are employed based on their signed and spoken/written language combinations and interpreting and translation expertise in a wide range of situations. Sign language interpreters tend to work in a variety of settings, from conferences to community settings. With spoken language interpreters there seems to be more of a divide between those who work at conferences and those who work in public service or legal settings².

Although the UN Convention on the Rights of People with Disabilities explicitly states that deaf sign language users have the right to professionally qualified interpreters, worldwide there is much variety in the training, professional development, employment opportunities and remuneration³ available for sign language

¹ In this paper we have not given consideration to subtitling, but with technological advancements (e.g. for respeaking), it could be considered as a form of translation.

² See Napier, J. (2015). Comparing spoken and signed language interpreting. In H. Mikkelsen & R. Jourdenais (Eds.), *Routledge Handbook of Interpreting Studies* (pp.129-143). New York: Routledge.

³ See Wit, M. de (2016). *Sign Language Interpreting in Europe*, Self-published. Printed by Create Space, Baarn, M. de Wit

interpreters and translators⁴, and the profession is at varying stages of development in different countries. The World Federation of the Deaf (WFD) and the World Association of Sign Language Interpreters (WASLI) are working collaboratively towards the professionalization of sign language interpreters in order for deaf sign language users to have access to information and services in society, e.g. in education and employment⁵.

As with spoken language interpreters, the development of technology and the use thereof has an impact on the sign language interpreter and translator profession, and thus on those who use the service. In particular we are seeing an increase in: (1) media (TV) interpreting (section 3); (2) remote interpreting (section 4); and (3) translation services (section 5). The advent of more effective and efficient video technology that makes it quicker and easier to film, edit and compress videos, has led to increasing demand for professional sign language translators, whereby translation services are provided from a written text to a signed language or vice versa, for example, for websites. Furthermore, the emergence of high-speed Internet and videocommunication and live-streaming tools, sign language interpreters are now frequently working in real time via some type of videolink. There are also newer areas of development that we may see having further impacts on the profession in future years.

3. MEDIA (TV) INTERPRETING

In many countries across the world sign language interpreters provide a live interpretation of the news on television (see Figure 1). Often, this is the only program that provides sign language interpretation in a national signed language on TV⁶. Some countries (such as the UK) also provide prepared translations of pre-recorded programs that are broadcast at different times of the day and also through the online platform of the TV channel.

Figure 1: Example of live news interpreting (UK)



(RedBee Media/ British Broadcasting Trust, 2018)

Increasingly, sign language interpretation is also provided live for emergency announcements or warnings on TV in case of natural disaster⁷ (e.g., we have seen this in USA, Australia and New Zealand – see Figure 2). There are also some examples where sign language interpreting is not provided on the regular television channel but is streamed via the website of the broadcasting company or via a special TV channel (e.g., Norway). Brazil for example, has implemented a digital TV system with accessibility tools that foresee the insertion of a sign language interpreter as an optional picture-in-picture feature, making it possible to readjust the size and position of the interpreter on screen

⁴ See Napier, J. (2009). (Ed.). *International perspectives on signed language interpreter education* (Washington DC: Gallaudet University Press) for examples of the different stages of professional development in different countries.

⁵ <https://wfdeaf.org/news/resources/co-operation-agreement-between-wfd-wasli/>

⁶ See:

Steiner, B (1998). Signs from the void: The comprehension and production of sign language on television. *Interpreting*, 3(2), 99-146.

Stone, C. (2009). *Toward a Deaf Translation Norm*. Washington, DC: Gallaudet University Press.

Wehmeyer, E (2015). Comprehension of television news signed language interpreters: A South African perspective. *Interpreting* 17(2), 195-222.

Xiao, X. & Feiyan, L (2013). Sign language interpreting on Chinese TV: Survey on user perspectives. *Perspectives: Studies in Translatology*, 21(1), 100-116.

⁷ See:

McKee, R. (2014). Breaking news: Sign language interpreters on television during natural disasters. *Interpreting*, 16(1), 107-130.

<https://wfdeaf.org/news/wfd-and-wasli-statement-communication-during-natural-disasters-and-other-mass-emergencies-for-deaf-people-who-use-signed-language/>

Figure 2: Example of emergency announcement interpreting (USA)



(Fox News, 2017, <https://www.youtube.com/watch?v=xtDJ6uEynvw>)

Media interpreters and translators can be either deaf or hearing professionals. Deaf interpreters either use a pivot (hearing or deaf interpreter), or they use live speech-to-text services to read the text and interpret live on television or other media channels. In some situations, interpreters are provided a prepared transcript for them to prepare a signed translation (see section 5). In some countries there are clear preferences (and sometimes policies) on having only deaf interpreters and translators on screen in order to have best practice models of sign language use, but this is sometimes difficult to implement due to the additional resources required (pivot interpreter or technology).

The WFD recommends that the provision of media interpreting should be carried out in close consultation with the national association of the deaf and deaf communities, as well as national professional interpreting associations. Furthermore, the WFD strongly emphasizes that the size of the interpreter inset (in vision interpreter) should reach at least half of the height of the television screen. The figures showed in this chapter portray good examples of appropriate sizes of interpreter insets making it possible for viewers to follow and understand the interpretation without having strain on the eyes. Smaller insets are contradictory to the purpose of having interpreter insets.

4. REMOTE INTERPRETING

New technologies and high-speed Internet services now make it possible for interpreters to work remotely via audio-video link (either videoconference, bespoke platforms or telecommunications software such as Skype), which is referred to by the International Association of Conference Interpreters (AIIC) as Distance Interpreting⁸—an umbrella term for the different remote working combinations of set ups—but is also referred to as video remote interpreting or video-mediated interpreting⁹. There are different forms and usages such as Video Remote Interpreting (VRI) and Video Relay Service (VRS). Not all countries provide these services and how the service is provided can also differ per country. VRS is a telephone service where the spoken message is relayed in sign language and vice versa. Video Remote Interpreting means that communication takes place via a video screen and at a distance. Remote interpreting can be used for a range of different reasons and when the interpreter is not at the same location as the users: to chat with family or friends, to participate in a meeting, for a medical consultation, or in conference settings. As sign languages are 3D languages this may have an effect on the comprehensibility of the signing. There are advantages and disadvantages to offering remote interpreting: research has shown that deaf people like remote interpreting for some situations, such as for short meetings, but interpreters can experience burnout¹⁰.

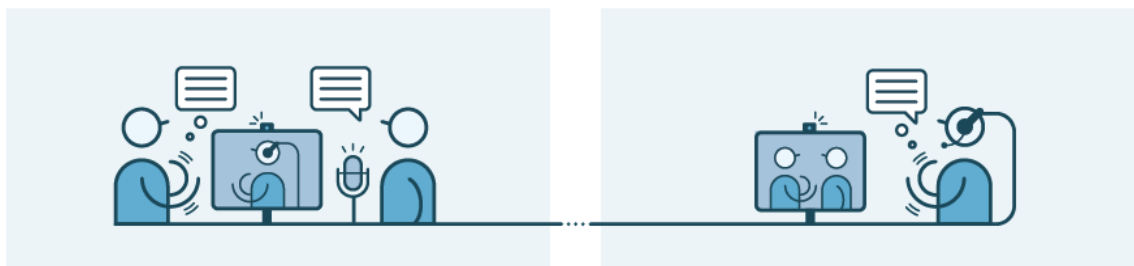
⁸ <https://aiic.net/page/8538/aiic-position-on-distance-interpreting/lang/1>

⁹ See Napier, J., Skinner, R., & Braun, S. (2018). *Here or there? Research on interpreting via videolink* (Washington, DC: Gallaudet University Press) for an overview of the latest research and policy.

¹⁰ [RID standard practice paper Video Remote Interpreting \(2010\)](#).

There are different types of remote interpreting: *Video remote interpreting* (VRI) is used where some participants are together in one location and other participants are in another location. The interpreter can be in either location (see for example, Figure 3).

Figure 3: Video remote interpreting (deaf & hearing participants in one location, and interpreter remote)

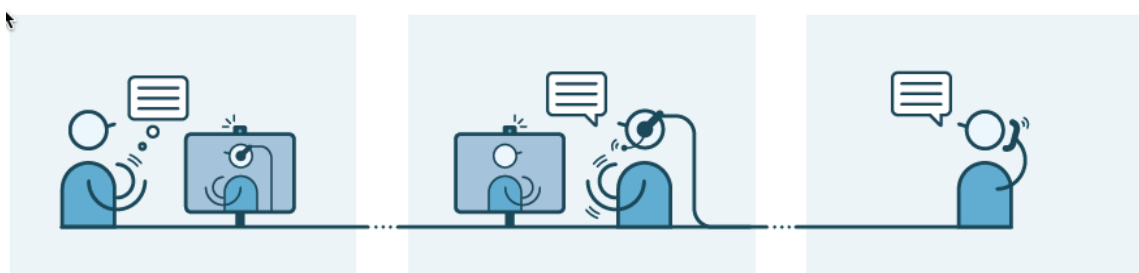


(Insign project, 2013-2014, <https://www.eud.eu/projects/past-projects/insign-project/>)

Caution must be given to the duration of the event that is interpreted remotely, as research has shown that there is extra cognitive load for interpreters working remotely, so they can tire more quickly. So a sufficient number of interpreters need to be booked to ensure the delivery of high quality interpretation, and/or appropriate breaks must be provided.

Another configuration of remote interpreting is when hearing and deaf participants are in two different locations, and the interpreter is in a third location. This is often referred to as a *video relay service* (VRS). A specific feature of VRS is that the interpreter is linked to the deaf person through video link and to a hearing person through a telephone link (see Figure 4)¹¹.

Figure 4: Video relay service



(Insign project, 2013-2014, <https://www.eud.eu/projects/past-projects/insign-project/>)

VRS is not common in every country and the cost structure and models of service provision differ. For example, in Australia, the service is funded by the government's universal service program, as is the case in Columbia and Paraguay, whereas in the US, the service is funded by a small levy from telephone subscribers and regulated through the Federal Communications Commission. In the UK, government funding is only available in Scotland but not in England, Wales or Northern Ireland, but deaf people can pay for interpreters for work meetings through VRI providers through their government 'Access to Work' funding. Furthermore, these VRI providers often also have a localised VRS component for a fee / contract, so organisations (such as banks) pay for contracts with these providers so their deaf customers can make contact. In other countries the caller might pay a small fee¹², for example, in the Netherlands, only deaf callers can use the service free of charge through their health insurance. Availability of VRS also varies across different countries, ranging from 24/7 to designated hours during the week. Some VRS providers also place restrictions on the number and length of time of calls per customer per day, according to funding structures.

Because demand for VRI and VRS interpreting is increasing, various organisations have developed best practice guidelines for interpreters in order to take into account the unique interpreting practices and standards in the VRI/VRS environment, which are critical to successful communication outcomes between participants. There is a growing amount of research in this area, and the development of training modules in some countries helps to

¹¹ Figures 3 and 4 were produced as part of the European Commission funded project: 'Insign: Improving the communication between deaf and hard of hearing persons and the EU institutions' (2014-2015), which was led by the European Union of the Deaf in collaboration with Heriot-Watt University, efsli, SignVideo, DesignIT and Ivès.
¹² https://www.itu.int/net/itunews/issues/2011/05/pdf/201105_30.pdf

create best practice benchmarks to ensure the quality of these services are able to closely match face-to-face interpreting standards.

Remote interpreting can be an effective solution for interpreter shortages in some areas, especially regional or rural areas, but caution is needed as remote interpreting is appropriate for certain settings, for example a one-to-one meeting. Remote interpreting should not be seen as a replacement for face-to-face interpreting, especially in high-stakes settings such as medical or legal, as interpreting from a distance may affect the understandability and reliability of the interpretation.

The WFD emphasizes that VRS and VRI should be an option offered to deaf persons, but that they should always have the ultimate right to choose between remote or on-site interpreting.

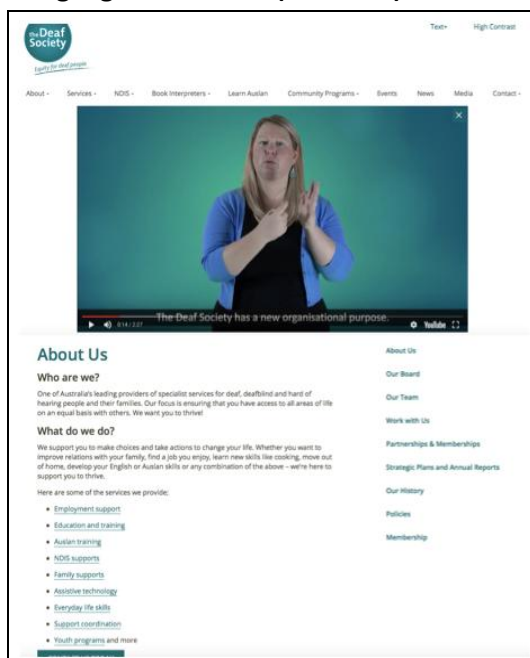
5. TRANSLATION

The difference between translation and interpreting is that translations are prepared, developed, reviewed, edited and polished before a final version is produced. Sign language translation services do not take place live and instead use pre-recorded media, such as video, or a written text. The source for the translation can have different formats, such as written, signed, or spoken. Providing a sign language translation gives the translator dedicated time to study the source material, instead of the pressure with live interpretation, and produce an adequate translation. The translation is video-recorded and then published in the preferred format, such as on the Internet or DVD. Many tourist locations and museums now offer sign language translations as part of their multimedia guides, with the information presented either through an app, on a touch screen or on a handheld device. It is best practice to work with deaf sign language users for translation work.

Web sites

Public authorities or organisations are increasingly adding sign language translations to their web content in order for it to be accessible for sign language users (see example in Figure 5). Sign language translation for a national body should be provided in the national sign language of the country. International oriented organisations can opt for adding a translation in International Sign.

Figure 5: Example of website sign language translation (Australia)



(Deaf Society, 2018, <https://deafsociety.org.au>)

Children's books

Books for children can be translated or produced in sign language (see example in Figure 6). There are also books in sign language built on customized templates to produce bilingual storybook apps¹³. Translated children's books can be used as a bilingual resource for teaching literacy to deaf children. There are varying design approaches to creating bilingual children's books. For example, for the younger the child, it is advisable to have big and clear video sizes on the screen.

The best practice is to have bilingual storybooks developed or translated by deaf sign language experts, and hearing interpreters may be involved in provide a spoken interpretation of the story for the video. Currently, this practice varies across different countries, as it is influenced by the availability of deaf translators.

Figure 6: Example of signed translation of children's storybook (USA)



(Julie Mason, 2015, <https://www.youtube.com/watch?v=BxzAiGh7bKk>)

6. FUTURE DEVELOPMENTS

The forms of interpreting and translation discussed so far have become well established due to the advent of new technologies. On-going advancements means that there may well be future technological developments that have further impact on the sign language interpreting profession.

Augmented Reality Glasses

An emerging way of providing brief interpretation services is via 'Augmented Reality Glasses'¹⁴ (e.g. Sony or Google), whereby the wearer of the glasses can see an interpreter and/ or captions. To date, this technology is very new and would require extensive research and feedback from signing deaf communities if this approach creates a new avenue for accessibility. This has not been widely implemented, but as the technology improves it may become more feasible to provide access to information in sign language in this format in some settings (e.g., art galleries or museums).

Automated sign language translation

New and emerging technology on access includes the development of automated sign translation through the use of signing avatars. These computer-animated figures tend to be managed by public authorities for a form of access to spoken or written content. This is often done in pre-recorded format; but it must be cautioned that avatars should not stand in for "word to word" translations.

As signed languages are fully-fledged languages with their own complex structures that are distinct from spoken languages, a word-to-sign exact translation is not possible because any translation needs to consider the context and the cultural norms. The WFD and WASLI have issued a statement on Signing Avatars¹⁵.

¹³ <http://vl2storybookapps.com/>

¹⁴ <https://arstechnica.com/gadgets/2014/05/google-glass-gives-the-deaf-an-asl-interpreter-even-in-the-dark/>

¹⁵ <https://wfdeaf.org/news/wfd-wasli-issue-statement-signing-avatars/>

We may see future developments on sign-to-text and text-to-sign (as well as speech-to-sign) translations through machine learning or deep learning. It is of paramount importance that Deaf communities are part of the design in the machine learning developments for any automated sign language translations.

7. SUMMARY

Although there are clear recommendations for best practice in sign language interpreting and translation, we still see variations of provision around the world due to the status of the profession and the technologies available. When considering sign language interpretation, translation and technology, countries need to consider their local contexts and the national technological capacity. Technology can be of benefit, but it should not replace face-to-face interpreting in community or conference settings.

Links to existing best practice guidelines:

VRS/ VRI	
Association of Sign Language Interpreters UK	https://youtu.be/OC7WCoeiE28
DeafLink	https://www.the-league.org/uploads/page/vri-best-practices.pdf
Registry of Interpreters for the Deaf (USA)	https://drive.google.com/file/d/0B3DKvZMfFLdTk4QnM3T1JRR1U/view
	https://drive.google.com/file/d/0B3DKvZMfFLdNE1zZGRPdN4NGM/view
National Association of the Deaf (USA)	https://www.nad.org/about-us/position-statements/position-statement-on-functionally-equivalent-telecommunications-for-deaf-and-hard-of-hearing-people/
	https://www.nad.org/about-us/position-statements/minimum-standards-for-video-remote-interpreting-services-in-medical-settings/
Website translation	
Australian Communications Consumer Action Network	https://accan.org.au/files/Grants/ACCAN_AuslanTranslationProject_FullReport.pdf
Sign On – online reading aid, translating from English to Sign Language	http://www.acm5.com/signon3/Netscape/index.html

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