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# Speech-to-text interpreting in Finland, Sweden and Austria

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**Abstract:** Speech-to-text (STT) interpreting is a type of intralingual interpreting mostly used by late deafened and hearing impaired persons who have a spoken language as their first language. In Finland, Sweden and Austria the speech-to-text transfer is performed in real-time by interpreters using a (specially adapted or standard) keyboard that is connected to a screen. As a result of different legislative frameworks governing services for the disabled, STT interpreting has developed differently in different countries and so far there has been little international cooperation. STT interpreting has also been largely ignored by Translation and Interpreting Studies. This paper examines the situation in Finland and Sweden, where STT interpreting training programmes have been available since the 1980s, and Austria, where the first training programme started in 2010, and investigates the norms, values and expectations that guide STT interpreters' practice in the three countries. It also looks at the factors necessary for the development of a distinct 'STT interpreting culture'.

**Keywords:** Speech-to-text interpreting, translation culture, public service interpreting, STT interpreting training, accessibility, hearing impaired people

## 1. Introduction

In the wake of the sociological turn in translation and interpreting studies in the 2000s, the focus of translation and interpreting (T&I) research widened increasingly to include the social role and professional status of translators and interpreters and encompass their own perception of the profession and that of the community which they serve. Recent studies that have examined the (self-) perception of conference interpreters include Dam and Korning Zethsen (2013), Pöchhacker (2009), and Zwischenberger (2009, 2013), while the social and professional role of court interpreters has been studied for instance by Kinnunen (2010, 2011) and Morris (2010), that of Sign Language interpreters by Grbic (2010), and the status of the interpreting profession in general by Wadensjö (2011).

One group of communication experts that has received little attention so far are the speech-to-text interpreters who translate spoken into written text for late-deafened or hard-of-hearing persons who have a spoken language as their first language and use spoken language, rather than signing, to communicate what they wish to say. Speech-to-text interpreting (STT interpreting, *kirjoitustulkkaus* in Finnish, *skrivtolkning* in Swedish and *Schriftdolmetschen*

in German)<sup>1</sup> is typically employed in public service settings, where it is used to assist communication between individual clients and officials, healthcare personnel etc., at the workplace and in educational settings, where again it is often employed to provide translation for individual students. It is also employed in (semi-)formal meetings, lectures and during cultural events, where the text is either displayed on a larger screen or on clients' personal tablets.

There are many reasons for why STT interpreters and their work have so far been largely ignored by T&I researchers.<sup>2</sup> Firstly, STT interpreters are engaged in intralingual rather than interlingual translation, so the activity has typically been viewed as beyond the remit of, or as irrelevant to interpreting research. Secondly, few scholars with a background other than in Sign Language interpreting have ever encountered STT interpreters in action and have knowledge of this mode of text transfer. Thirdly, many countries do not yet offer STT interpreter training programmes or have only recently established them; where they exist, these are typically run as professional development courses by adult education organisations often in collaboration with associations of the hard-of-hearing and not as university-level programmes.

However, the predicted rise<sup>3</sup> in the number of late-deafened people and cochlear implant wearers who will need STT interpreting support seems to justify greater attention by interpreting scholars as well as international cooperation, not least because STT interpreting as a real-time process shares many similarities with spoken interpreting, Sign Language interpreting and live subtitling (see for example Norberg, 2014; Norberg & Stachl-Peier, in press; Tiittula, 2006). Furthermore, it poses complex challenges, both for the STT interpreters and their clients. In order to translate this form of speech-to-text adequately the STT interpreters need to maintain high typing speed over a prolonged period of time and ensure that they include all markers that are essential to their clients' text comprehension such as correct punctuation, paragraphing, identification of the interlocutors as well as turn-taking plus any relevant environmental sounds.

The clients need to possess advanced reading skills in order to follow the displayed text on the screen. Comparative studies of speech-to-text, spoken and Sign Language interpreting could for instance provide new insights into the

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<sup>1</sup> The term *speech-to-text interpreting* (STT interpreting) as used in this paper covers both verbatim and summarising transcriptions. In the United States, STT interpreting is known as *real-time live captioning* and *Communication Access Realtime Translation* (CART) (see the website of the National Association of the Deaf in the United States (<http://nad.org/issues/technology/captioning/cart>, accessed on 25 April 2014). Stinson et al. (1998) (<http://www.pepnet.org/sites/default/files/53Real-Time%20Speech-to-text%20Services.pdf>) refer to STT interpreting as *real-time speech-to-text transcription* and distinguish between *steno-based transcription*, which uses a specially adapted keyboard and provides verbatim transcriptions, and computer-assisted notetaking with regular keyboards and non-verbatim renditions. In the United Kingdom, the National Association of Deafened People similarly distinguishes between *speech-to-text reporting*, i.e. verbatim transcription using special keyboards, and *electronic notetaking* that “will slightly simplify the speech and eliminate repetition” (<http://www.nadp.org.uk/wp/documents/cs%20ifft.pdf>, accessed on 25 April 2014). *Speech-to text reporting* is also used by the *European Federation of Hard of Hearing People* (EFHOH) (<http://www.efhoh.org/#!speech-to-text/c1mdt>, accessed on 15 August 2014).

<sup>2</sup> Exceptions are Susanne Wagner (2005) and Liisa Tiittula, who in 2006 published an article entitled “Schriftdolmetschen – Mündlichkeit im schriftlichen Gewand”) and later led a research project on STT interpreting called “SpeechText” at Tampere University, Finland.

<sup>3</sup> See for example *En samlad tolktjänst* (SOU 2011:83), a report published by the Swedish Riksdag ([http://www.riksdagen.se/sv/Dokument-Lagar/Utdredningar/Statens-offentliga-utredningar/En-samlad-tolktjanst\\_GZB383/?html=true](http://www.riksdagen.se/sv/Dokument-Lagar/Utdredningar/Statens-offentliga-utredningar/En-samlad-tolktjanst_GZB383/?html=true), accessed on 18 February 2015).

cognitive processes steering interpreters' output and listeners and readers' text comprehension. Equally importantly, collaboration would ensure that the same high quality standards are applied across all modes, creating a stronger public profile of interpreting generally as well as enhancing the occupational status of providers. Above all, it could assist STT interpreters in developing a clear(er) 'translation culture', which, as Prunč (1997) states, is essential if better recognition is to be achieved.<sup>4</sup>

This article represents a first step towards international cooperation and recognition of STT interpreting as a pertinent research field in T&I studies. We will describe the situation of STT interpreting in three European countries, namely Finland, Sweden and Austria. Finland and Sweden have a long tradition of STT interpreting and have been running training programmes since the early 1980s. In Sweden, STT interpreting today accounts for around 12 percent of the total assignments of interpreting for the deaf and hard-of hearing (Nysam, 2014), with a total of some 25,000 hours being funded by the regional councils. In Austria, by contrast, STT interpreting training has only been available since 2010 when the first STT interpreter training course was organized within the framework of an EU project. In Section 2, we will briefly describe the development of STT interpreting and the technologies available to interpreters. Section 3 outlines the situation of STT interpreting in the three countries including training opportunities and legal frameworks governing the activities of STT interpreters. In Section 4, we will examine the extent to which a distinct 'speech-to-text interpreting culture' can be said to exist in the three countries. The article will conclude with some suggestions for further (international) collaboration and research.

## **2. Speech-to-text interpreting: Techniques and procedures**

In this paper, the focus is on STT interpreting in public service settings where speech-to-text transfer is performed in real-time by interpreters using a (specially adapted or standard) keyboard that is connected to a screen, with the speaker(s), the interpreter(s) and their client(s) either present at the location or receiving interpretation remotely. Recent innovations such as respelling and the use of speech-recognition software will be referred to but not discussed in detail, since they have so far not been used in public service settings in the three countries studied in this article (see also Nofftz, 2014 for an overview). Nor will we consider the use of hand-written notes, even though these are still occasionally used in situations where no computers are available or their employment is impractical.<sup>5</sup>

As indicated above, STT interpreting has a comparatively short history which has been shaped by technological developments and, perhaps to an even greater degree, by the struggle of equal rights movements and national or local governments' willingness, or lack of it, to implement disability rights legislation. In Sweden and Finland, STT interpreting started in the late 1970s and early 1980s respectively, when text telephones began to be employed to assist hearing impaired people. The development of affordable laptop computers in the 1990s, and more recently of tablet computers and smart phones, has significantly facilitated access to STT interpreting.

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<sup>4</sup> 'Translation culture' defines the norms, conventions, expectations, values and habitualized patterns of behaviour that guide translational activities in a given domain in a certain area at a certain period of time (Prunč, 1997:107; see also Prunč, 2007:24f).

<sup>5</sup> The Swedish *Föreningen för Skriv- och TSS-tolkar* (Association for Speech-to-Text and Sign-supported Swedish Interpreters) for instance explains on its website that "during guided tours where it is technically not possible to use a computer the interpreter can use pen and paper" (<http://www.skrivochtsstolk.se/Tolkmetoder.html>, accessed on 25 April 2014; our translation).

There are essentially three types of keyboard which STT interpreters use, namely stenotype-based keyboards (frequently employed in English-speaking countries), Velotype (used primarily in Sweden, the Netherlands and France; see Nofftz, 2014), and standard computer keyboards. Stenotype keyboards were first developed for the verbatim transcription of courtroom proceedings. Stinson et al. (1998) trace the earliest application of stenotyping in (US American) non-courtroom settings to 1982. Stenotype systems encode the spoken language phonetically into a computer where it is converted into text. As keys can be ‘chorded’, i.e. several keys can be depressed at the same time, experienced users can attain typing speeds in excess of 200 words per minute (see Stinson et al., 1998).

Velotype, or veyboard as it was also called, is not a phonetic but an orthographic system with an ergonomically designed keyboard which also allows interpreters to press several keys simultaneously and with a single stroke produce complete strings of syllables or words. According to the manufacturers of Velotype,<sup>6</sup> a typing speed of up to 200 words per minute can be attained by competent users.<sup>7</sup> Although offering high quality support, stenotype based systems and Velotype have the major drawback that it can take over a year’s full-time training<sup>8</sup> for interpreters to become competent users. This is why many shorter STT interpreting training programmes opt for the use of standard computers with conventional keyboards and specially adapted software. The latter allows interpreters to change font size and colour quickly, which is particularly important for users with poor eyesight, and access a self-generated database of longer words, specialist terms and names, which are autocompleted when a pre-defined abbreviation is typed. The drawback of standard keyboards is their layout, which was not designed for fast typing. The arrangement of vowels and consonants does not reflect their frequency of use so that the average consistent typing speed of users is around only 90 words per minute (Lambourne et al., 2004; see also Nofftz, 2014). This is significantly slower than standard speaking rates which are around 150 wpm, but can exceed 200 wpm (Romero-Fresco, 2011, p. 8; Stinson, 1998, p. 7).

Recently speech recognition and respeaking have been gaining wide use. Developed initially for live subtitling on television for hearing-impaired viewers, respeaking is

a technique in which a person listens to the original sound of a live programme or event and respeaks it, including punctuation marks and some specific features for the deaf and hard-of-hearing audience, to a speech recognition software, which turns the recognized utterances into subtitles displayed on the screen with the shortest possible delay (Romero-Fresco, 2011, p. 1; see also e.g. Van Waes et al., 2013).

Respeaking and automatic speech recognition may in future also change the STT interpreting landscape in the countries studied here (see also Romero-Fresco, 2012, p. 92 and the EU BRIDGE project (<http://www.eu-bridge.eu>) on the development of automatic transcription and translation services). However, the aim of this article is to throw light on the situation in 2014 in the above-mentioned countries where respeaking is not yet used in public service settings.

The next section briefly reviews the history of STT interpreting in Finland, Sweden and Austria, the development of training programmes, pertinent legislation as well as employment regulations. In order to obtain more unofficial

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<sup>6</sup> [http://www.veyboard.nl/en\\_speed.html](http://www.veyboard.nl/en_speed.html), last accessed 1 March 2014.

<sup>7</sup> Lambourne et al. (2004) claims that consistent maximum speeds rarely exceed 90 to 120 wpm.

<sup>8</sup> This information applies in Sweden.

views and insights, interviews were conducted with several stakeholders.<sup>9</sup> The interviews were semi-structured and focused on the provision of STT interpreter training in the three countries, their history, the current legal framework and regulations governing certification as well as clients' expectations. The relevant sections of the interviews were transcribed. In addition, websites of STT interpreting providers were consulted and analysed for key concepts that could be seen as indicative of their perception of the STT interpreter's role, client expectations and service standards.

### **3. The situation of STT interpreting in the three countries**

#### **3.1 Finland**

Hand-written notes for hard-of-hearing persons have probably been used for a very long time, and are, as indicated above, still used when technical equipment is not available or not usable in a given setting. It was the advent of new communication technologies, however, that both precipitated and enabled the development of STT interpreting as a profession.

As already mentioned, STT interpreting in Finland was first employed in the early 1980s. Initially, text telephones were used. These were replaced by computers in the 1990s (Laurén, 2002, pp. 1–2). The first time STT interpreting was mentioned in an official document was in 1985 when a reference to it appeared in a circular of the National Board of Social Welfare in the context of deaf and deafblind interpreting services. This gave STT interpreting a certain degree of official status (Laurén, 2002, p. 1).

The first STT interpreter training courses were organized by the Finnish Federation for the Hard-of-hearing in the late 1980s; the Federation is still very active and continues to offer training courses. In the 2000s, responsibility for STT interpreter training was transferred to the Universities of Applied Sciences in Helsinki and Turku, which are also in charge of Sign Language interpreter education. These now offer 30-40 credit specialization programmes. To be admitted to the course, applicants need to attain a typing speed of at least 6,000 characters per 30 minutes, have good knowledge of Finnish orthography, good articulation, clear mouthing, good interaction skills (to facilitate communication between the interpreter and the clients prior to and during an assignment), and show an aptitude for the STT interpreting profession. The curriculum includes STT interpreting practice, professional ethics, an introduction to customer service, and training in how to communicate with different groups of clients. Sign Language interpreting students can also take courses in STT interpreting.

To be included on the official register of STT interpreters, the interpreters have to pass a test which consists of four parts: first, a typing speed test (the required speed is 9,000 characters per 30 minutes); second, STT interpretation of a lecture (evaluation criteria include correctness of the content, interpreting and typing errors, readability, etc.); third, interpreting in a community setting (evaluated by the client and the teacher); fourth, self-assessment of their own performance and ethical reflection. Only registered interpreters are commissioned by *Kela*, the Finnish Social Insurance Institution, which is in charge of social security benefits including interpreting services for the disabled. Currently, 317 interpreters are listed on the register and provide STT interpreting. 230 of these work both as speech-to-text and Sign Language interpreters, 87 work only as speech-to-text interpreters, that is, they are trained in STT interpreting only (S. Laurén, personal communication, 18 August 2014).

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<sup>9</sup> A total of five in-depth interviews were conducted between February and August 2014: one in Finland, two in Sweden and two in Austria. The interviewees included providers of training courses and STT interpreters. For confidentiality reasons, the authors do not wish to reveal the identity of the interviewees.

According to the legislation regulating services for the disabled, hearing-impaired people have the right to at least 180 hours of interpreting per year. The interpreting service is free of charge and can be used for work-related activities, education and participation in different (leisure-time) activities including theatre performances. The user of the service has the right to choose the interpreting method, which can be STT interpreting, signed Finnish or signed Swedish, Sign-supported Finnish or Swedish, finger spelling or 'screen interpreting', when a pre-typed text is displayed on a screen simultaneously with the spoken text, or finger spelling in combination with speech repeating or lip reading. STT interpreting can also be delivered remotely.

In Finland, no stenotype software or special keyboards are used. The STT interpreters use conventional QWERTY keyboards. Many STT interpreters still use standard Word text-processing software, although two special applications<sup>10</sup> have been developed for STT interpreting which permit word collection, completion and anticipation.

Registered STT interpreters are obliged to adhere to the same code of professional conduct as the Sign Language interpreters. The clients are also informed of the ethical code.

### 3.2 Sweden

As mentioned above, STT interpreting started in Sweden in the 1970s when text telephones were first employed to translate spoken to written text for D/deaf and hard-of-hearing people. In the 1980s, with the development of affordable data communication technologies, interpreters increasingly switched to computers. The spread of STT interpreting was further helped by the introduction of new disability legislation (for a historical overview, see Andersson 1997; in 1981, Sweden recognized Swedish Sign Language as a minority language and was the first country in the world to do so). Towards the end of the 1970s, a government investigation found that late deafened and hearing-impaired adults had been receiving less support than people who were born deaf. As a result, a series of action programmes was proposed to remedy the situation and promote this group's reintegration into the labour market. One of the proposals was the provision of more efficient STT interpreting services, another was the establishment of a training programme for STT interpreting which would produce the interpreters needed for the planned rehabilitation measures (Andersson, 1997, pp. 10ff).

Since the implementation of the amended Health and Medical Services Act in 1994, county councils have been required to provide interpreting services for D/deaf, deaf-blind, deafened and hard-of-hearing persons in work and healthcare contexts, for contacts with authorities, and also leisure-time activities. Interpreting services are free of charge for the client, and there is no upper limit to the number of hours of interpreting to which a person is entitled (see Niska, 2004).

STT interpreter training programmes have been available since 1981 and are organized by *folkhögskolor*, adult education centres that are financed either by regional authorities or are attached to political parties or charities. During their 150-year history the *folkhögskolor* have played a major role in Swedish society as highly flexible providers of training and education for disadvantaged groups, promoting equal access and democracy. Many *folkhögskolor* are residential centres and can provide accommodation for course participants. The ideological legacy coupled with the availability of appropriate facilities, the institutions' bureaucratic flexibility and the fact that they had been offering Sign Language interpreting programmes for many years and were familiar with the settings in which STT interpreting was to be employed, were no doubt seen as

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<sup>10</sup> For details on Kitu and Sprintanium see <http://www.sis.uta.fi/~csolsp/speechtext/links.php>, accessed 18 February 2015.

an advantage when it was decided that *folkhögskolor* should host the STT interpreting programmes.

From 1987, the STT interpreting programme lasted 32 weeks and was offered by *Strömbäcks folkhögskola* near Umeå in northern Sweden. In 1997, the course duration was extended to three years in order to ensure adequate time for training students in the use of the Velotype keyboard. Hopes, fuelled by the manufacturers of the new keyboard, had been high that the velotype would allow STT interpreters to attain typing speeds that equalled normal speech rates, as this report from 1990 (*Att bli tolk för kommunikation mellan hörselskadade, döva, dövblinda och hörande*) shows:

A new kind of keyboard, Velotype, is now used in interpreter training and will be used in STT interpreting in future. Words are written with several keys pressed simultaneously. A microcomputer then puts the letters in the right order. With the help of this equipment, the interpreter can type at a rate that matches the speed of speech. (1990, p.6; our translation)

However, the 3-year duration of the programme and also its location in northern Sweden eventually led to problems with recruiting new students. In 2006 the length of the programme was therefore reduced to two years, and finally in 2009, in conjunction with the course's relocation to Stockholm, to one year. The shorter course duration also resulted in the abandonment of Velotype training.

The STT interpreting programme offered today is a 10-month, full-time certification course. It is financed by the government and no tuition fees are charged. The curriculum comprises STT interpreting, an introduction to theoretical aspects of interpreting, methods and techniques, professional ethics, Swedish language analysis, specialist terminology, relevant legal and social aspects as well as *Tecken som stöd (TSS)*/Sign-supported Swedish (using signs from Swedish Sign Language to facilitate lip-reading). Candidates have to have completed secondary school and pass an entrance test in Swedish and typing.<sup>11</sup> Their aptitude is assessed in an interview.

The inclusion of TSS in the curriculum has been a matter of intense debate (see e.g. Tjernström & Karlsson 2006). Knowledge of TSS undoubtedly facilitates communication between STT interpreters and their clients and many hard-of-hearing people find that TSS is the mode of communication that suits them and their family and friends best (Andersson 1997). However, it also requires a longer training period.

The running of the STT interpreting programme by *folkhögskolor* has had major advantages and allowed great pedagogical and administrative flexibility. However, *folkhögskolor* are not attached to universities, so virtually no research has been conducted to accompany training reforms and develop suitable teaching methods.

In Sweden, there are currently around 100 registered STT interpreters who regularly work for the county councils. Around half use Velotype, the rest employ conventional QWERTY keyboards. The vast majority has received STT interpreting training. There is no national register of certified STT interpreters, nor does the *Kammarkollegiet* (Legal, Financial and Administrative Services Agency) organize accreditation tests for them, which they do for public service and legal interpreters for migrant languages and Swedish Sign Language. The county councils have autonomy to make decisions regarding qualification requirements and can choose to employ untrained interpreters if their rules do not stipulate that only trained interpreters may be hired.

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<sup>11</sup> see course curriculum: [http://sodertornsfolkhogskola.se/wp-content/uploads/2013/01/Vägledandekursplan\\_Skrivtolk\\_Södertörn\\_2014.pdf](http://sodertornsfolkhogskola.se/wp-content/uploads/2013/01/Vägledandekursplan_Skrivtolk_Södertörn_2014.pdf)

### 3.3 Austria

In Austria, STT interpreting has a very short history. The first STT interpreting training course started in 2010 with ten participants. The course was the outcome of an EU-funded project,<sup>12</sup> the aim of which was to assist the establishment of STT interpreting training in Austria and Slovakia, with DSB (*Deutscher Schwerhörigenbund*/German Association of the Hard-of-hearing) and ÖSB (*Österreichischer Schwerhörigenbund*/Austrian Federation of the Hard-of-hearing) among the consortium members. A second course, held from May 2013 until February 2014, was organized by *bfi Wien* (*Berufsförderungsinstitut Wien*/Vienna Institute for Professional Development) in collaboration with ÖSB. The third course ran from November 2014 until July 2015. A new course is scheduled to start in November 2015. The course fee in 2014/2015 was 3,650 euros. Financial support is available for eligible participants.

The programme comprises a total of 132 contact hours and includes a general introduction to different STT interpreting settings, medical and psychological aspects of hearing impairment, the use of hearing aids, legal information, employment issues, as well as 44 hours of keyboard skills (using standard keyboards), an introduction to remote transcription plus 40 hours of supervised practice. There are no plans to include Sign-supported German, mainly because it is not seen as sufficiently relevant but rather as a major and unnecessary obstacle in the already full curriculum (interview in Austria with two stakeholders on 21 March 2014). Applicants have to pass an admission test which assesses the candidates' grammar and punctuation skills, typing speed (250 characters per minute) and social skills. The timetable is tailored to the needs of full-time employed participants, with classes taking place on Friday afternoons and Saturdays. In the final examination a transcription rate of 400 characters per minute has to be attained (interview on 21 March 2014). Successful participants receive the *ÖSB zertifizierte/r transSCRIPT-Schriftdolmetscher/in* diploma, which is valid for 18 months. After 18 months, a 20-minute re-certification examination has to be taken which checks whether or not the STT interpreters can still attain the required transcription rate of 400 characters per minute. Currently, of the nine certified interpreters in Austria, only one works full-time (interview on 21 March 2014). All are self-employed. Information about STT interpreting is disseminated above all by ÖSB, which also runs a coordinating centre for STT interpreters called *trans.SCRIPT* ([www.transcript.at](http://www.transcript.at)).

Compared with Finland and Sweden, disability legislation giving d/Deaf and hard-of-hearing people the right to request equal access to information and communication was implemented late in Austria. After years of political struggle, Austrian Sign Language (ATSL) finally received minority language status on 1 September 2005. Funding is available for work-related and healthcare settings. For STT interpreting services, financial assistance (in all except one region) is available only when delivered to support the (re)integration of hard-of-hearing people into the labour market, provided these services are delivered by ÖSB-certified STT interpreters (*Umsetzungsregelungen Schriftdolmetsch – Leistungen, Zahl: OE: 21-44110-Stab/2012 vom 27.06.2012*<sup>13</sup>). In Carinthia, an agreement was reached with the Regional Insurance Board (*Kärntner Gebietskrankenkasse*), which agreed to finance STT interpreting costs also in healthcare. However, the service is virtually never used because no STT interpreters are resident in the region and the costs of

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<sup>12</sup> The programme was entitled “Verbreitung der Schriftdolmetscherausbildung in Österreich und der Slowakei durch e-learning zur Unterstützung hörgeschädigter Menschen/Establishing STT interpreting training programmes in Austria and Slovakia using e-learning to support hearing-impaired people”.

<sup>13</sup> Rules governing remuneration of STT interpreters.



commissioning interpreters from other regions are too high (telephone conversation with a Member of the ÖSB Board on 7 August 2014).<sup>14</sup>

Although legal and financial support for STT interpreting (including remote STT interpreting services) has thus been secured and ÖSB has also been very active in disseminating information about the new service, the wider establishment of STT interpreting has been hampered by two factors. The first is that many late deafened people are reluctant to admit that they have problems and tend to use a variety of strategies to conceal their hearing impairment. The second is that for the efficient promotion of the service among future users, more certified interpreters would be needed so as to guarantee that assignments can be adequately staffed. A proven track record of assignments is also essential if STT interpreting is to attract more recruits. Potential candidates expect to receive detailed information about career prospects and employment opportunities before committing to an expensive training programme. The establishment of their own professional association could assist the public visibility of STT interpreting and help recruit more interpreters. However, with currently only nine active STT interpreters, it is not a priority issue (interview on 21 March 2014).

Unlike in Finland and Sweden, there seems to be little cooperation between ÖSB and the Austrian Deaf Association (ÖGLB). In 2013 the president of the Austrian Deaf Association pointed out in an open letter to the Austrian Parliament that only a dozen deaf students were attending higher education programmes and appealed to MPs to secure the provision of adequate Sign Language services for “deaf and severely hearing impaired persons” through appropriate legislation. This prompted a sharp reply from ÖSB. In their letter to the Austrian Federal Chancellor they rejected ÖGLB’s claim to be speaking on behalf of hard-of-hearing persons, stressing that SL was appropriate for the d/Deaf, but that hard-of-hearing persons relied on audio technologies and communicated in spoken language. Demanding SL provision for hard-of-hearing persons, the letter argued, completely ignored the group’s real needs and was tantamount to “discriminating the 1.6 million people in Austria that were hard-of-hearing”.<sup>15</sup>

#### 4. STT interpreting culture?

The concept of ‘translation culture’ was first developed by Erich Prunč (1997) and defined as the

[...] subsystem of a culture which has grown over time and refers to the domain of translation, comprising a set of conventions, expectations and values that are established, controlled and controllable by societal factors and which apply to all agents currently or potentially involved in translation processes (p. 107). (Our translation).<sup>16</sup>

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<sup>14</sup> Students at the University of Technology in Vienna may also apply for STT interpreting support (<http://teachingsupport.tuwien.ac.at/gestu>).

<sup>15</sup> [http://www.oesbdachverband.at/fileadmin/PDF/Statement\\_ÖSB\\_auf\\_ÖGLB\\_Aussend.v.23.10.13\\_8.11.13.pdf](http://www.oesbdachverband.at/fileadmin/PDF/Statement_ÖSB_auf_ÖGLB_Aussend.v.23.10.13_8.11.13.pdf), accessed on 15 August 2014.

<sup>16</sup> [...] historisch gewachsenes Subsystem einer Kultur [...], das sich auf das Handlungsfeld Translation bezieht und das aus einem Set von gesellschaftlich etablierten, gesteuerten und steuerbaren Normen, Konventionen, Erwartungshaltungen und Wertvorstellungen aller in dieser Kultur aktuell oder potentiell an Translationsprozessen beteiligten Handlungspartner besteht.

The importance of developing such normative conventions for a given field of activity is highlighted by Grbic (2010). In a survey-based study of Sign Language interpreting in Austria, she concludes that many of the difficulties the Sign Language interpreters report are related to the hearing community's attitude to the D/deaf and the interpreters' own perception of their D/deaf clients. Sign Language interpreters need to have good social skills to be able to negotiate the various claims to power of the many different participants that are involved in each setting and creatively deal with conflicting interests, clearly state their own views and, if necessary, also act in contravention of accepted norms (Grbic 2010, p. 170).

It would seem that the same applies to speech-to-text interpreting. STT interpreters also need to be able to respond critically to (perceived) norms and conventions and resourcefully manage divergent expectations and values. In this section we will first look at the norms and conventions that STT interpreters are expected to abide by and the expectations and values that steer professional practice in the three countries. To this end, we will analyse key words and concepts used by STT interpreters in their self-presentations on their websites, how they describe their activity, the quality norms that they wish to fulfil and what they perceive to be clients' expectations.

#### 4.1 Sweden

In Sweden STT interpreters represent a well-established professional group whose origins are rooted in the country's strong equal rights tradition as embodied in the *folkhögskolor*. All D/deaf, deaf-blind and hard-of-hearing people are entitled to as many hours of (STT) interpreting as they need to cope with their daily lives. This rootedness in an ideology that above all strives to improve the lives of disadvantaged people may also explain why many STT interpreters present themselves as *verktyg mellan brukaren [...] och exempelvis en föreläsare eller deltagare på ett styrelsemöte* (a tool between user and e.g. a lecturer or participant in a board meeting),<sup>17</sup> *kostnadsfritt hjälpmedel* (an aid that is free of charge), and stress that they are providing a *samhällsnyttig tjänst* (a service that benefits society) to ensure that everyone can participate in social life.<sup>18</sup> Customer orientation (*rätt tolk på rätt plats* or literally translated, the right interpreter for the right setting) and the willingness to invest in professional development are further aspects that are mentioned.

Quality is also mentioned as a key factor, although the concept is often only vaguely defined and seems essentially to entail fast typing speed and accuracy as well as appropriate subject knowledge (see also <http://www.stockholmstolkarna.se/index.php/vara-ledord> who similarly seem to suggest that quality equals quantity and is tantamount to typing speed, accuracy and maximum completeness). Despite this prominence of 'maximum completeness' as the dominant quality criteria on the websites, many practising STT interpreters and trainers concur that good quality interpretation also implies interpretation in the sense of construing the significance or intention of an utterance, arguing in favour of adaptation to the needs of the target audience and the use of appropriate condensation strategies where necessary. Where STT interpreting providers subscribe to the latter view, this has had an impact on user expectations. In the initial years of STT interpreting in Sweden, for instance, speakers often spoke very slowly to ensure that the interpreters were able to write every word. Today, speakers use a normal speaking rate and users have begun to suggest that "not everything" needs to be recorded (interview on 21 February 2014). Conversely, where customers are told that they will receive verbatim transcriptions, users are likely to expect 100 percent renditions.

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<sup>17</sup> <http://sladdisa.blogg.se/2010/april/skrivtolk.html>.

<sup>18</sup> <http://www.skrivtolkning.se>.

## 4.2 Austria

In Austria, STT interpreters similarly describe themselves on the trans.SCRIPT website as *eine anerkannte zusätzliche Kommunikationshilfe für hörbeeinträchtigte Menschen* (a recognised additional communication aid for hearing-impaired people), which is presumably a user-friendly reference to disability legislation, yet also suggests – as do the definitions on the Swedish websites cited above – that STT interpreters are little more than helpful machines. This initially purveyed image is corrected in the section dealing with the STT interpreters’ professional profile, in which trans.SCRIPT clearly circumscribes the remit of STT interpreters’ duties, mentioning aspects which echo the codes of ethics adopted by interpreters’ associations worldwide, including that of the Association of Austrian Sign Language Interpreters and Translators:<sup>19</sup>

STT interpreters translate for hearing, hard-of-hearing and deaf people into written language. They are bound by confidentiality and are committed to impartiality. Guidance, assistance and explanations are not part of STT interpreters’ duties. They do not ask questions on behalf of their clients and their translations remain unbiased. Nor is it their responsibility to fill in forms for their clients. (<http://www.transscript.at/berufsbild/> accessed on 30 August 2014; our translation).

Other points (which also reflect the code of ethics on the Swedish websites) are concerned with STT interpreters further developing their professional skills, accepting only those assignments which they are competent to perform, and refraining from unfair competition and any actions or behaviour that may damage the reputation of the profession or of colleagues. ‘Quality’ is mentioned solely in the context of ‘quality assurance’, which, it is suggested, is guaranteed by the fact that funding is available only for interpreters who have passed the test and are listed on the ÖSB register. Although a definition of ‘quality’ is not provided, the imputed sense presumably accords with the requirements of the examination and indicates that maximum completeness and accuracy are the accepted criteria for high quality (see also the discussion above).

## 4.3. Finland

The self-presentations of Finnish STT interpreters and STT interpreter associations suggest a slightly different self-image. Although the *Svenska hörsselförbundet* (Finland-Swedish Association of the Hard-of-hearing) in its handbook for STT interpreting service users also describes STT interpreters as *ett hjälpmedel* (an aid) and that normally “everything uttered in the room will be translated, normally word-for-word”, they also indicate that STT interpreters and clients may agree on “something else”.<sup>20</sup> What this “something else” might be is explained by *Suomen kirjoitustulkkit/Finlands skriftolkar* (Association of Finland’s STT interpreters) who, on their website, define STT interpreting as

an activity during which the STT interpreter converts what she has heard into easily comprehensible format, without changing the content. The aim is to create, with the help of the written format, an illusion of orality in accord with the methods available to STT interpreting and its conditions. ([http://www.suomenkirjoitustulkkit.net/files/suomenkirjoitustulkkit/information%20p\\_%20svenska.pdf](http://www.suomenkirjoitustulkkit.net/files/suomenkirjoitustulkkit/information%20p_%20svenska.pdf), accessed 30 August 2014; our translation).

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<sup>19</sup> <http://www.oegsdv.at/was-ist-der-oegsdv/berufs-und-ehrenordnung/>, accessed on 30 August 2014.

<sup>20</sup> [http://www.horsel.fi/Site/Data/173/Files/Stik/skrivtolk\\_bestallning\\_anvandning04.pdf](http://www.horsel.fi/Site/Data/173/Files/Stik/skrivtolk_bestallning_anvandning04.pdf), accessed on 30 August 2014; our translation.

Among its goals the association lists “improving the profession’s appreciation among the general public”, “assuring uniform quality, reliability and consistent practice throughout the country” and “support for research into the profession and its development in educational institutions” (ibid.).

## 5. Conclusion

Interpreters were traditionally viewed as mouthpieces that simply rendered source-language messages in the target language without adding or omitting anything and without ‘interpreting’ in the sense of construing the meaning of the utterance. Since the late 1990s/early 2000s, the interpreter’s active influence on the interpreting setting has come into focus. Wadensjö’s (1998, p. 19) distinction between “talk as text” and “talk as interaction” prepared the way for a reformulation of the interpreter’s role. Interpreters began to be viewed also as intermediaries who were no longer neutral but acted as gatekeepers, managed turn-taking, and even intervened and mediated when an interactant indicated that s/he did not understand the meaning or content (see also Pöchhacker, 2004, p. 59). That interpreters often act as a ‘third party’ (ibid.) seems universally acknowledged (albeit not always appreciated) in spoken and Sign Language interpreting. In STT interpreting, by contrast, the traditional concept of the interpreter as an invisible vehicle or tool seems to be an enduring tenet that permeates both official documents and STT interpreters’ self-presentations. Originating in the belief that only complete and accurate transcriptions can give STT interpreting users equal access to communication, guidelines for STT interpreting still recommend word-for-word renditions including annotations to indicate dialectal or other elements of speech (see Tiittula, 2014). That this is not usually possible has been shown amongst others by Tiittula (2009) and Norberg and Stachl-Peier (in press). Indeed, STT interpreters become visible when they make corrections. Furthermore they have to – and do – use condensation strategies and prioritize primary information over what they consider to be secondary information.

Given these contradictions between professed behaviour and actual practice it is probably fair to conclude that a great deal of uncertainty still exists regarding the norms, conventions, expectations and values guiding STT interpreting. It would be important to explore how current conceptions have developed and whether they have been formulated by the users, communicated by trainers, resulted from STT interpreting practice, been defined by employers or professional associations, or whether they are the outcome of other factors. The analysis of STT interpreting providers’ websites and interviews with stakeholders suggest possible explanations, yet further research is necessary to gain in-depth understanding of the issues raised in this paper.

Another significant area would be to examine whether the term used to denote the STT practitioners also has an impact on their self-image. Do STT practitioners in countries where the terms *STT reporting*, *STT transcription* and *electronic note-taking* are employed also perceive their activity as *interpreting*?

The future of STT interpreting is likely to involve many changes, not least as a result of the impact of speech recognition technologies and the different qualifications and skills required for this. In Sweden and Finland, more and more sign and spoken language interpreters are planning to add STT interpreting to their qualifications in order to cope with the increasing number of settings in which STT interpreting is used and the growing demand for STT interpreting in educational contexts where hearing impaired and deaf students want STT interpreting especially in foreign language classes (interviews on 17 March 2014 and 26 May 2014). More collaboration between spoken language, Sign Language and STT interpreters and researchers would help all professions

to gain deeper insights into interpreting as a complex activity and could also assist STT interpreting in developing a distinct STT interpreting culture.

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## Interviews

Interview with a Finnish stakeholder on 26 May 2014

Interviews with Swedish stakeholders on 21 February 2014 and 17 March 2014

Interviews with Austrian stakeholders on 21 March 2014 and 7 August 2014