

- ✓ PARLIAMENTS
- ✓ CANTONS
- ✓ CITIES
- ✓ MUNICIPALITIES

ACCESSIBILITY, TRANSLATIONS AND MINUTE TAKING

Public live streams should be accessible to as many citizens as possible. In order to guarantee this, it is necessary to arrange for such streams to also be linguistically accessible.

New technologies and tools make it possible to make efficient use of this accessible implementation in a different form, for the requirements of parliaments, cantons, cities and municipalities in Switzerland.



SWISS TXT
ACCESSIBILITY SERVICES

- ✓ **QUALITY**
- ✓ **USER FRIENDLINESS**
- ✓ **INFRASTRUCTURE**
- ✓ **SAFETY STANDARDS**



Trained respeakers and live subtitlers guarantee a high standard of quality. The solutions for accessible implementation are designed to be user friendly and can be used on standard browsers and mobile phones. Individual use does not necessitate any major purchases of infrastructure or technical equipment.

Based on the integration into the SRG SSR safety systems, SWISS TXT is subject to high safety standards and guidelines, as well as the relevant guidelines for the protection of privacy.

Below is an excerpt of the options for implementation that SWISS TXT – a subsidiary and national competence centre for accessibility of SRG SSR – offers, among others:



LIVE TEXT



TRANSLATION



SUBTITLING



SIGN LANGUAGE

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SWISS TXT

Live text (1/2)

Subtitling

Translation

Sign language

Future

Prices and contact

LIVE TEXT: READ ALONG AND EDIT SIMULTANEOUSLY

Live text with or without video

Live text makes it possible to read along live to the spoken content. It is displayed in a narrow window, usually below a live stream or in a separate, independent text window, if only text display is required, for instance. The size of the display can be customised. Due to the continuous generation of text, the text is displayed very quickly, almost in real time. The text is available immediately to the specified group of persons through simple access via a link. It is possible for selected



persons/groups to set up a scroll/read option. This means, for example, that parliamentarians can re-read previously discussed content live, or the live text can be processed simultaneously or consecutively by the transcript services and thus used for minute taking.



Live text generated manually

To date, the standard for high-quality live text has been manual/human production by qualified, professional respeakers/interpreters. These are connected live online and generate the live text in one or more languages in parallel, so it can be read and/or edited. Live text generated manually stands out by its high level of accuracy, high quality and very low to non-existent need for correction afterwards. Texts can be added to simply, with the additional information required being added by editors, for example. The staff requirements are higher than for automatic transcription by means of automatic speech recognition, whereby higher costs are also to be taken into account.

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LIVE TEXT: READ ALONG AND EDIT SIMULTANEOUSLY



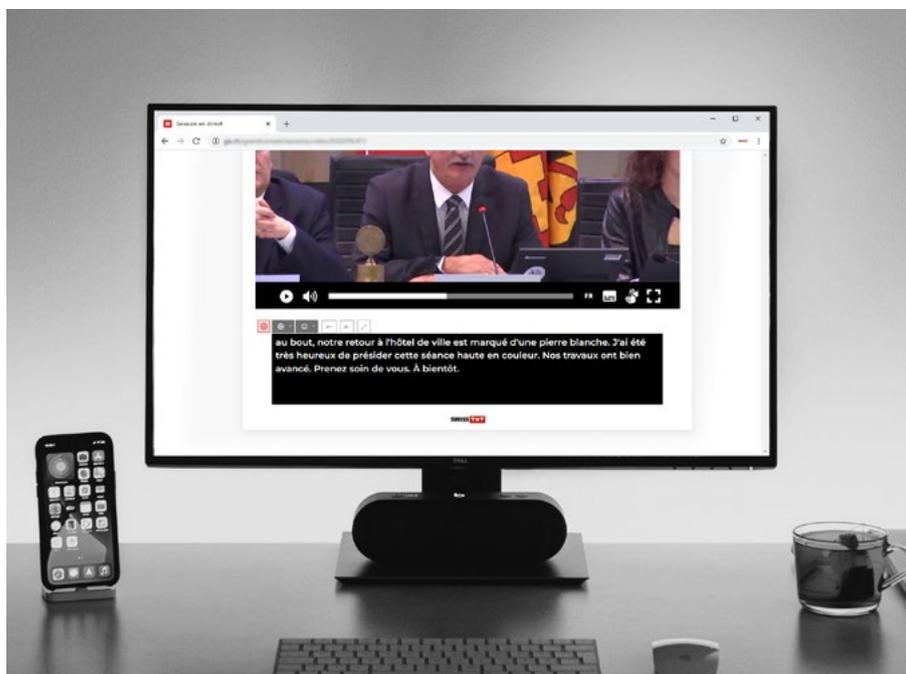
Live text generated automatically

Through innovative architecture and the integration of AI modules, the production of live text can also be carried out automatically or semi-automatically, with human correction afterwards.

This affordable alternative requires less staffing, however there is an increased need for corrections for post-processing, in the event that the texts are to be used for minute taking.

The texts can be edited either live and/or after the meetings, and additional information can also be added at a later stage by editors.

 *Optimal live text for accessibility and ideal for use for minute taking*



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SUBTITLING



Live subtitling via television subtitling systems

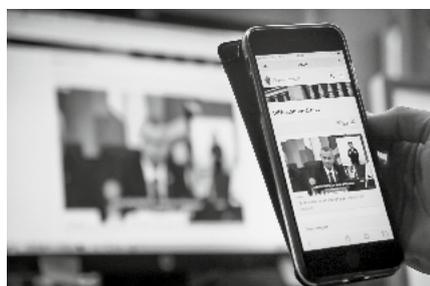
The high-end, manually created live subtitles are generated at the same standard as those that are used in television. The display is usually double spaced and optimised for efficient reading when following broadcasts. The playout can take place both on the online live stream as well as on television. The subtitles generated contain a time code and can be used for VoD/media library. The generation of subtitles is carried out by qualified live subtitlers for all of Switzerland's national languages including Romansh, and all Swiss dialects. Live subtitles are not suitable for being read during a meeting, for scrolling or processing the text in any other way in parallel. Following a transformation into live text, these can also be used for minutes, among other things. (For example, the Grand Council of Geneva)



Subtitle creation in post-production on the basis of the live texts generated

If live text was generated in the first step, time codes can subsequently be added to these manually or automatically, and the texts can be saved in a standard subtitle format. Thanks to this, live texts can also be used after processing as subtitles for media libraries, among other things. The costs vary quite significantly depending on the volume of text, quality/type and available processing time.

 *Can be used for TV and live streams, as well as for minute taking after processing*



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MULTILINGUAL LIVE TEXT



Multilingual live text based on simultaneous translation

For multilingual live streams, which have at their disposal several audio channels with simultaneous interpretation, live text can be generated manually for several languages at the same time, and if required, it can be displayed individually on special players/tools (e.g. simultaneous display in German and French to follow the original text and the simultaneous translation). The live transcription is carried out in this case on the basis of the audio channels provided and if necessary with the appropriate time delay, and with the accurate transcription of the simultaneous translation provided by people. The advantage of this live transcription is usually a high quality in the translation, as well as consistency of the audio channel with the transcription in the language translated.

 *Multilingual accessible representation on the basis of the simultaneous interpretation provided*



Live text – automatic translation with/without correction

Another possibility is simultaneous automatic translation by means of a special architecture and integrated AI, which refers to the original text. This automatic translation appears almost in real time and in any eligible language, and can be edited/processed as required. This solution allows for many different language combinations, works very quickly, is cost effective and user friendly, and can even achieve a high level of quality with simultaneous human correction by qualified translators. An additional simultaneous interpretation in the audio channel is no longer required.

 *Accessible content transfer for people with a foreign-language background and across linguistic borders in all national languages*

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SIGN LANGUAGE

Blending of sign language: Studio variant

The production of sign language in the studio allows for a high-end result meeting the highest requirements in television quality for the live stream and VoD/media library. The studios are equipped with high-quality technology and connected online. Sign language interpretation can be integrated both in the live stream as well as in the TV programmes. Recordings make it possible for this to be used in media libraries and as VoD.

 *High-end result in television quality*



Blending of sign language: Home studio variant

The production of sign language from the home studio optimised for live streams allows for a high-quality result with a very good price-performance ratio. The location-independent home studio production stands out because of its high degree of flexibility and allows for simple implementation of different languages. The sign language interpreters are specially equipped so that a consistent, professional image is created. This production can also be made available after recording for media libraries/VoD.

 *Optimised implementation for integration into live streams*

FUTURE



The future involves additional use of avatars

SWISS TXT, together with various universities and educational institutions in Switzerland, as well as the Swiss federation for deaf people, is involved in leading research projects that are concerned with the automation of sign language translations. The aim here is to be able to offer, alongside human interpretation, the possibility of also providing automated sign language. This cost-effective alternative is considered, for instance, on television for off-peak times (at night or very early in the morning) and would also be conceivable for being able to cover large volumes. So in the future, the aim of making 100% of information accessible in sign language ought to be viable. However, the use of sign language interpreters is currently the preferred option in order to guarantee the comprehensibility of important topics.



PRICES

The prices can vary quite significantly. The more automatic elements are used, the more affordable the service becomes. The more human/manual production is used, the lower the need for subsequent correction.

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