Technical capabilities of automated audio description

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Abstract. The scientific research is a description of the features of using resources and programs for automated translation in the context of the work of audio description translators. The presented positive arguments in favor of using these digital technologies to improve the effectiveness of the translator's work in all fields of activity, including socially oriented translation, help to analyze the automated audio description process as a whole. The paper contains a comparative analysis of popular resources for automated translation and describes their characteristics. Recommendations are given on the use of these digital resources in the practice of an audio description translator, as well as the prospects for their development and the relevance of their use for the development of professional competencies of an audio description translator. The interpretation of the specifics of working with resources and programs for automated audio description translation is proposed.

Keywords: audio description, resources for automated translation, audio description commentary, digital technologies in translation, audiovisual translation.

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Introduction

Automated translation tools have improved significantly over the past decade in terms of the interface available to practicing translators in various fields of activity. So, if at the beginning of the 21st century computer equipment was, by and large, only an option for recording information along with paper media, today digital technologies can be called effective assistants to a specialist in the field of both interpretation and translation.

Moreover, the existing resources for automated translation take into account most of the necessary aspects and stages of the process of transferring information from one language to another, including non-verbal languages and sign systems. Automated translation is now undoubtedly an indispensable tool in the work of professional translators, as well as in the academic environment, in economic analysis, legal practice, literature, journalism, and many other fields.

Literature review

Researchers Shu Zhou, Shuo Zhao, and Michael Groves note in their scientific work on digital bilingualism that at this stage of the industry's development, machine translation is very convenient, effective, and also available to perform a significant number of different professional tasks [1]. Such resources can be accessed both in an expanded form on a personal computer and on mobile devices, which significantly expands their situational usefulness. Resources for machine translation can also be automatically integrated into other digital programs, and even publishing websites, as, for example, in the case of the Taylor and Francis publishing house database [2].

Materials and methods

The programs and resources used in automated translation are striking in their variety: machine translation, terminology extraction programs, concordances, transliteration programs, various text bodies for scientific research, electronic dictionaries with a user-friendly modern interface, as well as resources for remote interpretation. The number of such resources is constantly growing, updates and more effective tools for automated translation are appearing.

So, a professional resource for reviewing and evaluating software, g2.com, today cites 48 programs in the "Listings in Computer-Assisted Translation Available" category, including programs such as Trados Studio, SmartCAT, MemoQ, Google Cloud Translation API, Unbabel, MateCat, and others [3]. This source provides the most extensive and complete list, while many others report that it is enough for a professional translator to know about 7–10 programs, depending on the specifics, and 2–3 programs aimed at solving highly specialized tasks are enough for a practitioner or researcher from other industries.

It can be noted that such digital resources contain a wide range of tools that can facilitate the work of a translator to one degree or another for all types of translation, in particular, for the types of socially oriented translation that are gaining popularity.

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One of the relevant areas of modern translation activity in this field is audio description translation or audio transcription. As indicated on the official website of the registered charitable organization. The Audio Description Association (ADA), audio description translation is an audio commentary for visually impaired people.

Audio transcription today accompanies many mass cultural events, such as theatrical productions, films, sporting events, exhibitions, and is also provided in museums and public spaces. In addition, television programs have now also begun to be equipped with similar comments [4]. All over the world, this process is developing gradually and has a positive trend, but it is not yet represented on all platforms. For example, the Audio Transcription Association reports that in the UK, only 21% of theaters offer performances accompanied by audio commentary.

Audio description translation is also an urgent area in the Republic of Kazakhstan, which requires the translation market to provide new services and constantly improve the skills of specialists in this area. Specialized programs and resources for working with audio files, as well as programs for automated translation in general, can significantly enhance the competence of an audio description translator.

To ensure that digital films created in artistic or animated form are accessible to the visually impaired, additional audio accompaniment for the blind and visually impaired should be included in the package of files for digital display (in a digital film copy): audio commentary, which is played in the cinema through headsets (headphones) included either in the receiver of a wired or wireless sound transmission system.

The audio commentary in a digital film copy must be transmitted via audio channels in accordance with the standards for professional digital cinematography.

The parameters of the specialized audio signal of the typhoid commentary must meet the requirements of the standards for the signals of the main channels of the soundtrack of a film in digital cinema and the requirements.

Information about the availability of a specialized audio description commentary channel in a digital film copy must be indicated in its name in the audio format field.

Results and Discussion

The aim of this study was to analyze existing resources for automated translation in the context of the possibility of their effective use in audio description translation activities.

In the modern industry, the use of professional digital technologies is recognized as an integral part of the work of an audio description translator (audio description commentator). For example, the official website of the Institute of Vocational Rehabilitation and Staff Training of the Reacomp contains the program of the course "Audio description", which was prepared by the honored worker of the REAC O.V. Sergeeva with the participation of O.E. Kudryavtseva. In this training program, considerable attention is paid to technology.

So, among the key sections of the course, one can see such topics as automated audio description transcription technical means for developing audio description commentation, preparation of t audio description commentation text using a personal computer and related

software, technical means for generating audio description commentation, technical means for transmitting audio description commentation to the blind, and others [5].

Among the programs that allow for effective work with audio description commentation, there can be named resources such as VoiceOverMaker, 3Play Media, CaptioningStar, Rescribe App, RightHear, etc. All of them are designed for both audio description commentators and regular users, as they contain a wide range of features and tools. For example, 3 Play Media allows to work directly from a web browser without installing additional software, which makes working with this resource easy and does not require additional costs. The resource offers the creation of subtitles, hidden subtitles, audio description commentation, and translation [6].

It should be noted that the development of artificial intelligence also has a significant impact on audio description translation. Apple machine learning website describes the operation of the Rescribe application, which allows users and content authors to upload a project with the information necessary for audio description, and then independently adapts it to the visual range [7].

Voice Over Maker is also an excellent alternative for use by a wide range of users. This digital resource is equipped with an interface aimed at creating natural voice acting based on texts and can be used for YouTube, for various educational videos, broadcasting, game videos, and many other visual images that need to be provided with audio commentary. The application allows to select more than 160 voice options, it can also set a specific gender of the speaker, choose a child's voice. The content can be voiced in many languages, and it is possible to create own podcast based on text material [8].

A separate category of digital resources created for the convenience of visually impaired and blind people are applications that are used directly by them, and not created specifically for the work of an audio description commentator, for example, the RightHear application. This application contains descriptions of more than 2,000 geographical locations around the world and transforms the environment into a space accessible to everyone, helping people with visual impairments travel.

However, a specialist in this field should also understand the work of such resources if he does not act as a user of their interface for providing audio description commentation, but as the creator of such resources as an audio description reader. The development of this competence seems to be an extremely promising area of training.

It is also necessary to mention the audio description commentator gadget, which is a software and hardware tool based on a mobile device with software designed to receive hidden audio description commentary on this device. The device is used for time-limited media commentary (Internet, cinema, television, radio).

The main requirements for using the audio description commentator gadget are:

● an up-to-date version of the screen reader with a Russian-language speech synthesizer must be installed and activated in the audio description commentator gadget;

● language packages of the country's nationalities must be pre-installed in the audio description commentator gadget;

● the interfaces and content used in the process of receiving audio description commentary must meet the requirements;

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● the audio description commentator gadget should work with current models of Braille displays;

● the audio description commentator gadget should provide for the possibility of selecting the left, right, or both headphones to play audio commentary.;

● the synchronization time of the audio description commentator gadget with the media content should not exceed 1 second. In cinematography, the parameters of the source material of the audio description commentary for the preparation of a special application for the audio description commentator gadget must meet the requirements.

Conclusion

The paper contains a comparative analysis of popular resources for automated translation and describes their characteristics. It also gives recommendations on using these digital resources in the practice of an audio description translator, as well as prospects for their development and the relevance of their use for the development of professional competencies of an audio description translator. The interpretation of the specifics of working with resources and programs for automated audio description translation is proposed.

It can be seen from the analysis of audio description commentation programs popular in the translation services market that, at the moment, audio description translation is not fully automated, since such programs do not offer automatic interpretation of visual images and video materials without human intervention. The resource interface for automated audio description translation necessarily contains a stage of semantic interpretation of what the audio description translator has seen, as a result of which the created text can be conveniently incorporated into the visual material in the form of additional audio files for the convenience of visually impaired and blind people.

Based on a comparative analysis of the sources, it can be concluded that the resources for automated audio description translation are used as an aid to the audio description translator, rather than replacing it. At the moment, it is not necessary to fully complete all the necessary work steps to achieve the desired result. They are able to adapt the uploaded text to the length of the original audio track of the video, make it more convenient for voice acting, and save the audio description interpreter from performing this technical stage independently.

However, the choice of language tools for the most accurate transmission of what is happening, taking into account the features of video recording, visual images, visual aspects of real-time action, and in other situations requiring audio description commentation, can only be made by a person.

Thus, it is quite obvious that the issue of the prospects for developing programs for automated audio description translation is only part of the work on training qualified audio description translators. The development of related competencies should also include, but not be limited to, skills in working with technical means for automated audio description translation.

The scientific research is a description of the features of using resources and programs for automated translation in the context of the work of audio description translators. The presented

positive arguments in favor of using these digital technologies to improve the effectiveness of the translator's work in all fields of activity, including socially oriented translation, help to analyze the automated audio description process as a whole. The paper contains a comparative analysis of popular resources for automated translation and describes their characteristics.

Contribution of the authors

Kenzhigozhina K.S. collection of empirical material, conducting a literary review, analyzing data, as well as studying the works of foreign and domestic scientists; **Akizhanova D.M. –** analyzing the features of using resources and programs for automated translation in the context of the work of audio description translators; **Raissova A.B. – c**ontributing to the development of the concept of the article, the study and analysis of the collected materials.

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Технические возможности автоматизированной аудиодескрипции

Аннотация. Научное исследование представляет собой описание особенностей использования ресурсов и программ для автоматизированного перевода в контексте работы специалистов-тифлопереводчиков. Представленные положительные аргументы в пользу применения данных цифровых технологий для повышения эффективности работы переводчика во всех сферах деятельности, в том числе в социально-ориентированном переводе помогают проанализировать автоматизированный процесс тифлоперевода в целом. Работа содержит сравнительный анализ популярных ресурсов для автоматизированного перевода, описаны их характеристики. Даются рекомендации по использованию данных цифровых ресурсов в практике тифлопереводчика, а также перспективы их развития и актуальность их применения для развития профессиональных компетенций тифлопереводчика. Предлагается интерпретация специфики работы с ресурсами и программами для автоматизированного тифлоперевода.

Ключевые слова: тифлоперевод, ресурсы для автоматизированного перевода, тифлокомментарий, цифровые технологии в переводе, аудиовизуальный перевод.

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Автоматтандырылған аудиодескрипцияның техникалық мүмкіндіктері

Аңдатпа. Ғылыми зерттеу тифло аудармашылар мамандарының жұмысы контекстінде автоматтандырылған аударма үшін ресурстар мен бағдарламаларды пайдалану ерекшеліктерінің сипаттамасы болып табылады. Аудармашының барлық қызмет салаларында, оның ішінде әлеуметтік-бағытталған аудармада тиімділігін арттыру үшін осы цифрлық технологияларды қолдану пайдасына ұсынылған оң дәлелдер тифло аударманың автоматтандырылған процесін тұтастай талдауға көмектеседі. Жұмыста автоматтандырылған аударма үшін танымал ресурстардың салыстырмалы талдауы бар, олардың сипаттамалары сипатталған. Тифло аудармашының тәжірибесінде осы цифрлық ресурстарды пайдалану бойынша ұсыныстар, сондай-ақ олардың даму перспективалары және тифло аудармашының кәсіби құзыреттерін дамыту үшін оларды қолданудың өзектілігі беріледі. Автоматтандырылған тифлотасымалдау үшін ресурстармен және бағдарламалармен жұмыс істеу ерекшеліктерін түсіндіру ұсынылады.

Түйін сөздер: тифлоаударма, автоматтандырылған аударма ресурстары, тифлокомментарий, аудармадағы цифрлық технологиялар, аудиовизуалды аударма.

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