

Implications of Equal Opportunities in CS

A Case Study on Closed Captioning Services for Virtual Events Accessibility

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Introduction

The assignment asks to present a case study highlighting issues of inclusion or exclusion in the context of Computer Science. I will present a case study [1] from July 2024 about the company *Captioning Star* that provided closed captioning for online events in order to improve their accessibility for Deaf or Hearing Impaired (DHI) people. The case study is particularly relevant in the current context of societies relying increasingly on digital systems and a few years after the Covid-19 crisis which significantly transformed social interactions, giving more importance to online events.

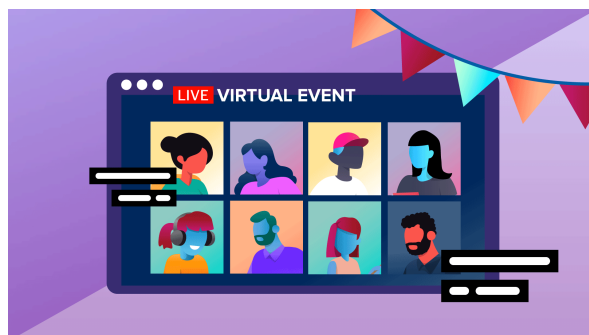


Figure 1: *Virtual events are becoming the norm nowadays.*

Context

In our contemporary world, online events are increasingly attractive for both hosts (such as corporations, events services, educational groups) and the public. Online group meetings are becoming the norm in working and educational environments due to the rise of remote work or teaching. Regarding webinars and conferences, 93% of event marketers hosting events have transitioned from in-person to virtual events [2]. From the hosts' point of view, there are different reasons why such events are so popular - for instance an increase in worldwide audience (lack of geographical restrictions, recorded events), easier logistics and administration, as well as financial gains [3]. Hosts are then able to organise events more frequently and give voice to a larger set of speakers throughout the year. From the public's point of view, who mostly attend virtual meetings for information or educational purposes [3], the main benefit is the ease of attendance as only a connected device is required.

Keys Challenges & Impacts

However, a large majority of these events fail to provide accessibility to all types of users and particularly to the DHI. On the one hand, the problems faced by DHI people during online events can vary a lot : bad audio quality, failure to lip-read people speaking as they are poorly visible on the screen, lack of information about the speaker's identity etc... [4] Such challenges can lead to an uncomfortable experience for DHI attendees : fatigue out of concentration, frustration of not receiving the same information as the other attendees, and finally renouncement to follow online events. On the other hand, organisers do not exclude DHI people on purpose but rather out of ignorance by failing to ensure proper accessibility or to provide inclusive alternatives. It is a discrimination against DHI attendees as they are asked to pay the same price as the others but receive a poorer experience and less service. This exclusion raises problems for hosts too as they obviously lose a part of their public and damage their reputation amongst a certain population - the DHI represent over 5% of the world's population [5].

Solution Offered - Case Study



Figure 2: *Logo of Captioning Star Company*

One possible way to tackle the lack of accessibility of online events is closed captioning, which is a text display of the spoken words and sounds in a video. On this topic, the company Captioning Star offered their services for a live webinar for one of their clients and their collaboration was described in a case study [1]. The client's requirements were the accuracy of transcribed words, a fast delivery of captioning without delays and the service's reliability over the whole event. The company managed to deliver a service that respected all these specifications and which even "exceeded expectations", providing an almost-immediate transcription with "99% accuracy". The captioning service enhanced the event's accessibility by making this virtual event more convenient and attractive to DHI attendees as they resolved all the issues mentioned earlier in . The collaboration was a success and the client is now using the company's services on a regular basis for its virtual events ("up to 20 events monthly"). This long-term partnership highlights the fact that nowadays, organisations hosting virtual events consider accessibility as a standard and necessary service, not as a bonus. Of course, the company benefits too from an improved accessibility of its events with "higher participation rates" and "enhanced reputation" as an inclusive organisation. Therefore, everyone benefits from the closed captioning technology.

Possible Improvements

Some possible improvements can be suggested (the article did not describe in detail the captioning system so the suggestions might be already in place). DHI attendees could be offered a re-transcription of the captioning afterwards, to avoid missing some part of the transcription, or if they were not attending live for instance. Plus, users' experience could be improved further if a real-time translation of languages could be offered, attracting an even broader public. Finally, a virtual avatar could be designed for real-time transcription in Sign Language so that the service would be compatible with all DHI users' preferences. In parallel, it is important to note that there exist guidelines on how to organise and run deaf-accessible virtual events [6], which hosts should take into account at each of their virtual events.

Conclusion

In conclusion, closed captioning technology serves as a valuable tool for enhancing accessibility during virtual events, benefiting all stakeholders, including the DHI, event hosts, and IT companies providing this service.

As a side note, I chose this subject because I am sensitive to the challenges faced by DHI people, especially in our digital world. I am personally deaf from one ear, although I hear almost entirely since it is prenatal so the other ear compensated. Thus, I sometimes encounter issues such as difficulties of concentration in noisy environments, lack of sound localisation, and difficulties to follow conversations in the context of online group meetings, which echo to the issues mentioned previously. Therefore, I was glad to see that technological solutions are being developed to enhance all users' experience during virtual events and hope it continues that way.

References

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- [6] Government of Canada. Best practices for accessible virtual events, <https://ally.canada.ca/en/best-practices-for-accessible-virtual-events/>.