

外国語要旨

学位論文題目：Design and evaluation of universal design oriented caption presentation method with speech balloons.

氏名：Yuko ODA, (KONYA)

We consider captions used with foreign language translations or as information support for hearing-impaired people. In particular, Japanese language captions qualify as information support. Captions are used increasingly with high-priority contents such as news reports, but their use with entertainment content is not increasing. Understanding the plot of a play, movie, or television program requires knowing who is speaking and what that person is speaking. The absence of captions deprives the hearing impaired of the opportunity to enjoy entertainment content. In addition, unimpaired people also miss out on hearing whispers, rare words, and rapid voices. There is no sense in providing a different content to the handicapped. Both the hearing impaired and unimpaired should be able to enjoy and share the same content.

There are many ways to access information in video form, but conditions are not always well suited to that form, as in silent venues (such as museums) or noisy ones (such as train cars). Captions can be helpful in such cases. In this research, captions are viewed as a communication tool that can connect content (video, theater, conference, or lecture) and person. A caption is intended to provide a visual representation of sound to enhance the enjoyment of the content without the sound. This research focuses on hearing-impaired people, including those who are familiar with signing. More specifically, we focus on people who understand Japanese.

In this thesis, I explain existing caption presentation methods, discuss related work, and propose two types of balloon-type caption presentation systems. The first proposed system includes support for dialogue, sound effects, and audience response; this system enables both the hearing impaired and unimpaired to enjoy theatrical performances simultaneously. The second proposal provides captioning with effect information, i.e., not only text information but also speech expression. People feel and recognize scenes based on various aspects of speech such as speed, volume, and tone of voice. The proposed systems are implemented and applied to real plays and silent videos. In addition, I conduct interviews and questionnaires. Finally, I summarize the thesis and discuss future possibilities.