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System And Method For Providing Assistive Video/Audio Conference Channel

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SYSTEM AND METHOD FOR PROVIDING ASSISTIVE VIDEO/AUDIO CONFERENCE CHANNEL

ABSTRACT

A system and method are disclosed for providing an assistive video/audio conference channel to a user with hearing assistive devices. The system could be configured to provide a separate channel in a videoconferencing application setting accessible to hearing assistive devices. The channel could be capable of sending audio from any remote speaker. The system and method could be implemented as a virtual additional assistive channel to the existing videoconferencing software applications.

BACKGROUND

A user with hearing assistive devices such as a cochlear implant, a bionic ear, and hearing aids encounters several problems during conference calls. He may connect his assistive devices to the conference call through any processing device such as a personal computer, laptop, or cellular device. These devices get an additional channel to the conference settings that allow the user to listen to a speaker in a remote location joined in the current conference call. At the same time, the user may hear audio from the speakers who are located in the same room, thus creating double audio stream with a different phase and echo. Additionally, if an interpreter joins a call from a remote location, the image icon corresponding to the interpreter may be displayed instead of the actual remote participant on a screen for the others, thus causing some distraction. Also people with some hearing loss may speak with an accent; therefore, it is important to provide higher audio quality to remote users. When audio is transferred to remote locations via a conference call, the combination of an accented speech and a degraded audio conference channel makes the accented user’s speech incomprehensible for remote users. This is especially a problem for remote transcribers. Currently, providing a Bluetooth connector is a benefit only for the users who have a device that can sync the audio directly to a user's cochlear implant or hearing aids via

FM technology. It also depends on the quality of the audio in the audio rooms. For example, if the user is using a laptop and syncs the device with it, as the audio has only one channel, it will be sent directly to the hearing aid, and other users/audiences cannot hear audio from the user's laptop. The user could also position a speaker near the microphone of an assistive hearing device via special channels. The problem associated with this setting is that the audio coming from a speaker to a mike may be not of good quality. If the position of the hearing device is changed, then audio parameters also change. Furthermore, this setting requires a close proximity of a user to a speaker, which is inconvenient. Thus, there is a need for a solution providing improvement in video/audio conference setting that goes beyond accessibility applications.

DESCRIPTION

This disclosure presents a system and method for providing an assistive video/audio conference channel to a user with hearing assistive devices. The system is configured to provide a separate channel in a videoconferencing application setting accessible to hearing assistive devices. The channel is capable of sending audio from any remote speaker.

If there is a speaker located in the same room as a user, the system is provided with several options chosen by the user. One of the options is blocking audio that comes from a conference call from participants who are located in the same room as the user. Other options could be blocking display assistive channel-related icons for other participants in the conference call. The system further provides an option of providing high priority in a threading system to information that is associated with the assistive channels. This option avoids delays in audio or transcription streaming for the user with the assisting devices.

The system and method could be implemented as a virtual additional assistive channel to the existing videoconferencing software applications. Because these applications are used by large number of users worldwide and there is a significant portion of users with hearing

loss or speak with accent, it is expected that this kind of system becomes a standard feature of any conference setting. This could also be extended to a translation channel system.

The method provides a distinct communication assistive channel for a user with an assistive hearing or provides transcription services such as a sign interpreter or CART provider or an automatic translation/transcription/interrelation system. The communication channel consists of a rich protocol setting to allow various scenarios executed for different users.