

SOUND DATA

Narzullayev Shahzad Tohir ugli

Forish District Polytechnic

Teacher of Informatics and Information Technology

Abstract

Sound information occupies an important place in our lives. They allow us to provide information about the world around us, gain knowledge, communicate with other people and perform many other tasks.

Keywords: Virtual and additional reality, neurointerfaces, sound data, analogous sound, macromedia flash 8 program, digital sound.

Introduction

Sound data (audio data) - we understand sound, music, four-voice and other types of sound recordings. This information can be stored in analog or digital form.

Basic Concepts About Sound

Analog sound: it is a natural sound that is expressed through constantly changing physical quantities (such as air pressure). The recording in gramplastinka is an example of an analog sound.

Digital sound: the appearance of Analog sound converted to digital. Here the sound is described as a complex of discrete values (zeros and ones). MP3, WAV, FLAC are examples of digital audio formats.

Frequency: the number of oscillations of a sound per second. The higher the frequency, the louder the sound.

Amplitude: the distance between the highest point and the lowest point of the sound wave. The amplitude determines the pitch of the sound.

Timbre: a distinctive feature of various sound sources. For example, the same note of piano and guitar sounds different as they have different timbres.

Graphic image of sound wave. The concepts of amplitude and frequency can be clearly seen.

Main Functions of Sound Data:

Communication: through sound, we deliver our thoughts, feelings and information to each other. Telephone, radio, communication over the internet, listening to lectures, conducting negotiations – all this is done using sound data.

Obtaining information: listening to books, audio lessons, podcasts, news – all these are convenient and effective methods for obtaining knowledge.

Entertainment: listening to music, watching movies and series, reading audiobooks – all this gives us pleasure and helps us relax.



Control: with voice assistants, it is possible to control various devices, perform searches and many other tasks.

Creative work: musicians, actors, voice actors use sound in the process of creative work.

The importance of sound information in various fields:

Medicine: detecting diseases through sound analysis, for example, listening to the sounds of the heart.

Linguistics: the study of languages, speech analysis, the creation of translation systems.

Psychology: determining the emotional state of a person through sound.

Biology: analyzing the sounds of animals and studying their behavior.

Macromedia Flash 8 also has the ability to read and use sound information. There are two different ways in which Macromedia Flash 8 can place a sonic reference in a working domain:

1. File - > Import - > Import to Stage... by selecting the sequence;
2. File—► Import - ► Import Video... by selecting the sequence.

To the working area of the Macromedia Flash 8 program .mp3 file ken - gait sound information placement.

Performance:

a. File—^Import - ► Import to Stage... by selecting a sequence, the folder in which the sound data is placed is selected

b. From the folder, the desired file is marked and the postcard button is pressed. The selected file will be uploaded to the Librare section

c. The downloaded file must be transferred to the working area. To do this, the file uploaded to the Librare section is marked and dragged using the mouse button:

To the working area of the Macromedia Flash 8 program .avi file Ken-gait sound reference placement:

Performance:

1. File—► Import - ► Import Video... the sequence is chosen.
2. Browse through this window... the button is selected and the desired file is marked from the folder where the sound data is located, and the postcard button is pressed.
3. The downloaded file must be transferred to the working area. To do this, the file uploaded to the Librare section is marked and dragged using the mouse button. In some cases, errors may occur when the video file is dying. Then using a program that modifies the file extension .it is necessary to transfer to the avi file extension

Processing and analysis of sound data

Recording: analog sound is received through a microphone and then converted to digital.

Storage: stored as a digital audio file on a computer, flashboard, or other storage devices.

Analysis: spectral analysis of sound, noise elimination, pitch change and many other operas can be performed.

Synthesis: creating artificial sound, that is, creating a mathematical model of sound on a computer and using it to obtain new sounds.

Applications Of Sound Information

Music: creating, writing, analyzing and distributing musical works.

Communication: sending and receiving voice messages over the phone, radio, internet.

Voice assistants: communicate with voice assistants such as Siri, Google Assistant.

Voice control: control different devices through voice commands.

Education: audiobooks, audio lessons and other educational materials.

Voice recognition: biometric identification, voice search, etc.

Cinema and television: creating sound effects, soundtracks.

Future Opportunities

Virtual and augmented reality: using sonic information to create more realistic virtual and augmented reality experiences.

Neurointerpheys: analyzing brain waves and transforming a person's thoughts into sound.

Artificial intelligence: further development of sound recognition, translation and generation technologies using artificial intelligence.

Sound data is important in the modern world, and technologies for their processing and analysis are constantly developing.

References

1. Andrey Zhdanov, Alexander Prokhorov. Speech input as a keyboard alternative, www.compress.com.2004-y.
2. <http://pcpro100.info>
3. Alexander.M. "Voice voice to read text voice programs live", www.ocomp.info, 2017.
4. Akhmedov A.B, Taylakov N. Informatics. Textbook for AL and KHK. - T.: "Uzbekistan", 2004.
- 5.N. I. Under taylakov's general edit. Informatics and Information Technology. 1st edition of the textbook for the 11th grade of secondary educational institutions and for the pupils of secondary specialized, vocational educational institutions. Extremum-press. Tashkent – 2018.

