표정인식에 의한 노래 플레이어

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Player of Song by Face Recognition

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요 약

개인의 얼굴 표정을 인식하고 그 사람에게 적합한 음악을 재생하는 시스템 인 Face Song Player가 제공됩니다. 얼굴 윤곽선 정보를 학습하고 평균을 추출하여 얼굴 모양 정보를 획득합니다. MUCT DB는 학습을위한 DB로 사용되었습니다. 얼굴 표정을 인식하기 위해 표정이 없는 이미지를 기반으로 각 표현의 특성 차이를 사용하여 알고리즘을 설계했습니다.

ABSTRACT

Face Song Player, which is a system that recognizes the facial expression of an individual and plays music that is appropriate for such person, is presented. It studies information on the facial contour lines and extracts an average, and acquires the facial shape information. MUCT DB was used as the DB for learning. For the recognition of facial expression, an algorithm was designed by using the differences in the characteristics of each of the expressions on the basis of expressionless images.

키워드

Face song player, facial expression, MUCT DB

Ⅰ. Introduction

It is the reality that contemporary people have lack of time and means of relieving stress arising from their daily lives. Accordingly, we need a program that can relieve the stress we encounter in our daily life. For example, we need a system that recognizes us as friends and reads books by discerning our mood. In addition, it is much more effective if psychological pacification effects can be achieved at low cost. Moreover, such method would be substantially more effective if it could be used for a diverse range of purposes including education or games for the users.

Ⅱ. Related Work

Production and perception music encourages a broad range of sensory, cognitive and emotional processes. Emotion is the core function of the joy of music. Emotion can be deemed the core function of the joy of music along with the marked and diversified emotional states reported continuously by people throughout the period of listening to music [1]. As such, music imparts a substantial influence on our emotions. Playing music in accordance with one's facial expression could be very interesting and beneficial from the perspective of a therapeutic effect. Such a sensible process is manifested not only in music but also within a monitor. Expanding the horizontal angle of view in the monitor is an important characteristic of integral imaging monitors[2]. This method expands the angle of view to be changed by the appropriate application of our

* speaker

conversion algorithm by increasing the density of the image element in a horizontal direction.

Ⅲ. Face Recognition

(1) Happiness: Distance between philtrum and top of the center of the lips becomes closer. The distance between both the distal tip of the mouth increases.

Height of the eyes decreases. The both distal tips of the cheeks of the nose become broader.

Condition) Standard height of the eyes>Current height of the eyes

AND

Standard width of the mouth<Current width of the mouth (More than 5%)

AND

Standard distance between the philtrum and lips>Current distance between the philtrum and lips

(More than 3%)

AND

Standard distance between the both cheeks of the nose<Current distance between both cheeks of the nose

(More than 3%)

(2) Sorrow: Width of the middle of the forehead becomes narrower, eyes get smaller and the distal tip of the mouth sags.

Conditions)Standard width of the middle of the forehead>Width of the middle of the forehead

(More than 1%)

AND

Standard height of the eyes>Current height of the eyes

AND

Standard distance between the chin and lower tip of the lips>Current between the philtrum and eyebrows

(More than 3%)

(3) Surprise: Eyebrows are raised with the opening up of the mouth. The distance between the eyebrows and the top of the eyelids increases.

Conditions) Standard distance between the philtrum and eyebrows<Current distance between the philtrum and eyebrows

(More than 3%)

AND

Standard height of the mouth>Current height of the mouth

AND

Standard distance between the eyebrows and the top of the eyelids<Current distance between the eyebrows and the top of the eyelids

(More than 3%)

Ⅴ. 결 론

In this papers, Face Song Player that recognizes the facial expression of people and playing music that is appropriate for the ambience of such expression was presented. An average was extracted through learning information on facial contour lines and the acquired information on facial shapes. MUCT DB was used as the DB for this purpose.

References

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