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Structure model Characteristics of Design Related Elements Using Intuitive Distance Measurement

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Abstract

The goal of this research is to reveal and prove a new component structure methods under investigation of intuitive evaluation process charters that reflect design-related elements.
The research was conducted using composition elements of digital camera as design related elements to operate under two different circumstances.
First, evaluation on the relationship of components is researched under one-on-one comparison order. Second, intuitive overall evaluation was conducted. Afterwards, characteristics discovered on each structure model were analyzed with actual recording of subject activities.
As a result of the research, the structure model evaluated from intuitive relationship of design elements within a product, result a strong relationship between the influence of memory information of the user, so called and the activity process.

Keywords

Intuitive evaluation, Distance measurement, Structure model, Human action process

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A Study of Emotional Effect from Motion-Ride

Analysis of Emotion by Physiological Response

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Abstract

Motion-Ride has not only been developed for operation training of cars and aircrafts but also for entertainment. We thought it is important to amplify a person's emotion in motion-ride for entertainment purpose. We studied if motions have an effect on a person's emotion by using motion-ride. In this study, we paid special attention to the effect in person's emotion through motion patterns. First, we made a virtual roller coaster by 3DCG. Second, we made three motion patterns program: 1) motion-less, image only. 2) synchronized motion to a virtual roller coaster. 3) enhanced motion to the virtual roller coaster. Third, we experimented on the effect of person's emotion through three motion patterns. In this experiment, we investigated psychological response and physiological response. Psychological response was investigated by Semantic Differential method, and Physiological response was investigated by mental perspiration response. As results, we have found that enhanced motion gave the highest emotion value according to Semantic differential method. In addition, according to mental perspiration response, we found out that there was a high emotional value at the beginning of the motion, and at the rapid stages of the motion. These results signified that emotional effect decreased by the experience. As a conclusion, to amplify emotional effect in motion-ride, it is important to consider the change in the emotion by the experience in addition to enhanced motion.

Keywords

motion-ride, virtual reality, 3DCG