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Interactive Comedy: Laugh as Next Intelligence System

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Abstract

Generally, technology looks at the external value of the object. At the very deep level, however, laugh is related to the touch of living and the internal value. It is very difficult to grasp this deep relationship.

Our personal feeling is the key to grasp this. This is not an issue of analysis or understanding, but an issue of the activities of our mind such as the jump of the idea and imagination. Laugh is an intelligence that emerges based on the sympathetic communications and, therefore, has a great power.

Recently, artificial intelligence research focuses too much on analysis and knowledge and because of this tendency, is likely to achieve only boring results. Real Intelligence is not boring. Therefore the intelligence we develop should not be boring. So, I developed a comedy system by which human and computer can interact and create laugh.

1 Introduction

Laugh is an essence of verbal conversation. We transmit information by verbal conversation. At the same time, verbal conversation transmits our emotions and our basic desires [1]. Therefore verbal conversation is a basis for maintaining human relations and social lives. In this type of conversation, such factors as the voice tone, timing, and speed play very important roles [2]. By controlling them, we enjoy conversations, keep human relations and maintain social lives [3].

2 MANZAI AS JAPANESE COMEDY

Communications has an aspect of entertainment and this aspect of communications strongly appeals to us. Therefore a well arranged conversations entertain us. There is an entertainment called comical dialogues in which conversation is sophisticated to a level of entertainment. In Japan we have our own form of comical dialogues called Manzai. We enjoy Manzai by listening to

the dialogue of two Manzai comedians. The two comedians play the role of "Boke" and "Tsukkomi." Boke plays a role of an ordinary person who expresses his/her everyday opinions. Sometimes these opinions are surface and boring and far from reality. Tsukkomi plays a role of a sensitive person who is keen to detect these opinions and becomes offensive to Boke. Boke shrinks from the opinions of Tsukkomi but sometimes becomes waked up to the reality. For the conversation between Boke and Tsukkomi, such factors as voice tone, timing, and speech are the keys as well as the conversation content. When these factors are well controlled, the audience is fascinated and involved into the conversation. They want to become Manzai comedians by themselves.



Figure 1. Interactive Comedy System

3 INTERACTIVE COMEDY SYSTEM

Interactive comedy system is a system that realizes such a dream. You play a role of defence and the computer plays the role of offence. When you speak, the computer analyses the content, emotion, speed and timing of your utterance and utters back an appropriate Tsukkomi

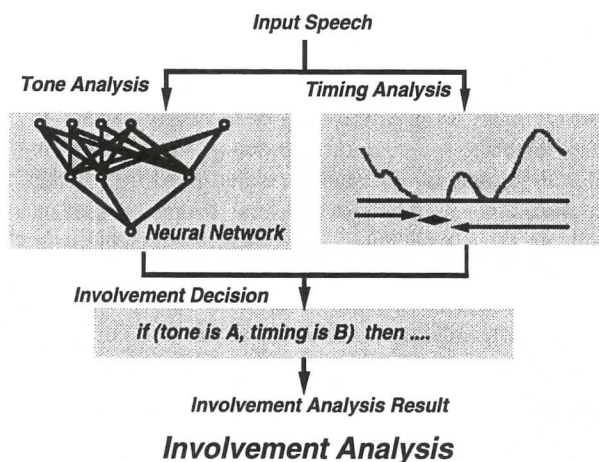


Figure 4. The involvement analysis diagram

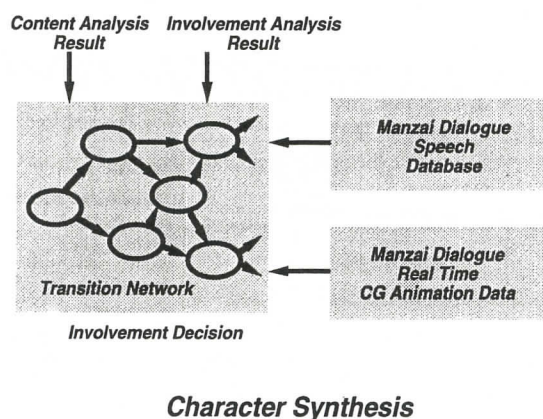


Figure 3. Real-time based Computer Graphics Character Synthesis

CONCLUSION

This system was demonstrated and broadcasted in the "Most Interesting News Digest in 2001," the program of Asahi TV on the New Year's Eve. We received grand prize in the future robot category. This system is simple, but the technology introduced here to make people laugh has strong sympathetic power for the public in the worldwide. Laugh means open mind and real communication among each other. Computer can be make laugh. It is very intelligent interaction. But, when people are too conscious of making fun, the communications do not go smoothly and become difficult. This means that laugh is related to the nonverbal and subconscious aspect of our intelligence. If this type of technology would be introduced into computer system or robot in the future, in

our society feeling of hospitality and care of people would become more important.

Also, comedy script is very important issue to make a laugh. Laugh is dependent strongly on domestic culture, and in each country the meaning of laugh is very different.

For the Japanese version of Interactive Manzai the script was developed by Yoshimoto Entertainment Company in Japan. Then when I showed Interactive Comedy in Boston, Improve Asylum who is the best comedy group in Boston translates them into an American style. In this spring, we showed the English version of Interactive Comedy System in Japan Pop Culture Festival, one of event of Haru Fest in Boston, at MIT Media Labs Bartos Theater that was organised by Consulate General of Japan in Boston.

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