



Research on the interaction of service design using virtual avatars

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Abstract. In recent years, there has been a decline in the human workforce in Japan due to a declining birth rate and aging population; this has become a serious problem. Robots are one of the most effective key technologies that can be employed to solve this problem. Furthermore, the use of humanoid robots to supplement the human workforce may also be a potential solution. However, it is difficult to implement humanoid robots for service design across the size of an average business owing to high maintenance costs. Therefore, in this research, we focus on using virtual avatars as part of the workforce as they can interact with people similar to a humanoid robot and are less expensive in comparison. There are two advantages of supplementing the workforce with virtual avatars. Firstly, since the display is the only main piece of hardware needed to support a worker, this clearly reduces costs. Secondly, because virtual avatars are nothing more than software, they are easy to update. We experimented to prove this in addition, we conducted a questionnaire survey on the interaction between virtual avatars and humans in an actual work environment. The object of comparison was a worker support system using words and illustrations. It was found that the impression "friendly" was registered as a high response to the questionnaire. Such a result suggests that having the support of a virtual avatar for workers is useful because it has the effect of improving interaction in the same way as a humanoid robot.

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