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# Research on Distributed Brainstorming Support System with Backchannel Function

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This paper describes the development and evaluation of distributed brainstorming support system with backchannel function, then considers the effect of the backchannel in distributed environment. The developed Idea Planter system consists of five functions which support the participant's actions in distributed environment.

First of all, the system provides the function that can gathering the participant's ideas. Next, the second function, which provides each user's ability to browse other participant's ideas. Then, the third function, which provides the backchannel action to ideas. The fourth function provides user a browsing backchannel of ideas system. Last, the fifth function, which provides supporting system to question about unknown ideas. Moreover, we defined three factors of backchannel, Ability to see or sensitivity to problems, Originality and Elaboration. This system notifies participants of type and quantity of backchannel by flower objects that blossom from cotyledon into bud, and flower.

In the experiment, we compared the effects using the two separated systems, says, the first system (Backchannel: provided) has all functions, and the second system (Backchannel: none), which has four functions excluding backchannel function. One group was formed with four people, and was experimented by two groups in total. In the end, there are two problems

occurred, New function and design of refrigerator, and New function and design of washing machine. The evaluation of the experiment was base on quantity and quality (fluency, flexibility, originality, and feasibility) of created ideas by each system.

To summarize, this experiment suggests that backchannel functions had the effect of increasing quantity, fluency, flexibility, originality, and Feasibility of created ideas. Moreover, it was suggest that effect; the more backchannel of “ Elaboration ”, the more flexibility and Feasibility of created ideas.