







studies, it became clear that collaborative service has a dual dimension of production: the first dimension is the production of a solution, i.e., a service that solves social problems of users. Because this is the main goal of a collaborative service and the outcome is visible and measurable, all the service design tools that are currently available are dedicated to this dimension, i.e., how to design a solution that most effectively solves the existing social problems. The other dimension is the production of social capital<sup>2</sup>. Social capital is not only essential to the creation of a collaborative service and is amplified through the service. One element of social capital that is focused on this research is social network.

According to the sociologist Granovetter (1973), a difficult innovation diffuses through personal weak ties. Because ICT can contribute to the creation of new social networks and reinforcement of the existing social networks (Kavanaugh 1999), it can be concluded that ICT can contribute to the diffusion of innovations by enriching the social networks - especially the weak ties - of innovators. Going back to the relationship between collaborative services and ICT, ICT creates and reinforces the weak ties of collaborative organizations and through these weak ties the innovative solutions of collaborative services spread. The solutions, in turn, enrich the social network through various collaborative activities. This virtuous cycle between the solution and the social network creates a synergy effect in diffusing social innovations.

The future works to be done can be summarized into two tasks: First, to analyze in depth the synergy between the dual dimension of collaborative service using qualitative method such as interview and quantitative method such as social network analysis. Second, to use this result to identify how a designer can create an environment that stimulates people to form the social network and to produce creative ideas. Through these works, the following questions need be answered: Can a designer create a condition that stimulates the production of social network using design tools and can it be included in the process of service design? How does social network influence creativity?

## Reference

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<sup>2</sup> Among many definitions of Social capital, one by Putnam best describes social capital in this context: 'features of social organization, such as networks, norms and social trust that facilitate coordination and cooperation for mutual benefit' (Putnam 1995)