Building a creativity collective: Using the crowd to solve societal problems

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Recently funded by the National Science Foundation, Jeffrey V. Nickerson, and Yasuaki Sakamoto of Stevens Institute of Technology are conducting research on how well design can be accomplished by a set of individuals quickly assembled online -- a cyber crowd.

Over the next three years, their research project entitled, "Crowdsourcing Creativity: Experiments in Design," will build an idea ecology. Concepts will be treated like the chromosomes of a population that evolves in order to solve a problem. The crowd generates the ideas, selects the fittest, and combines them to create new ideas.

Behind the ecology is a modern way of thinking about innovation. Individual creativity was widely recognized in the Renaissance. More recently, in the last several decades, creativity has been described as a social process carried out by teams of closely knit people working in start-ups and research laboratories. But today, innovation can be accomplished through a new form of coordination mediated by the Internet. For example, an ad hoc team of 100 can create, evaluate, and combine ideas in a matter of hours. Then, these new ideas can be passed to another team of 100 for improvement, and so on.

"Because of the emergence of crowds of individuals online who will undertake small tasks for fun or money, there is now a crowdsourcing marketplace that is diverse, large and motivated," says Nickerson, Director of the Center for Decision Technologies. "We think that the crowd can innovate, providing new and specific solutions to broad social

problems, such as those related to our need for energy."

To test this conjecture, Nickerson and Sakamoto will perform a series of graduated experiments. First, members of the public will be asked to generate, evaluate and modify ideas, without any interaction with each other. Next, members of the public will interact with each other while creating the ideas. Finally, the public will be asked to design its own unique creative process and pursue its own problems.

"The Internet makes possible a different kind of design which is an extension of collaborative problem solving," explains Dr. George P. Korfiatis, Interim President of Stevens. "Professor Nickerson's and Professor Sakamoto's work will develop a new way of approaching design problems, and this new approach has the potential to accelerate many creative processes."

As their investigations proceed, Nickerson and Sakamoto will discuss what has been learned about how and why crowds are effective and which creative tasks are best suited for crowdsourcing. They also plan to leave in place a continually self-improving idea generation process. "If we truly believe in the crowd", says Nickerson, "we ought to let it control its evolution."

  More information: To learn more about this new field of research, please visit: howe.stevens.edu/cdt

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