Workforce from the digital cloud

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By means of cloud computing, enterprises can access scalable computing power and storage capacity. A people cloud, by contrast, supplies a scalable number of workers via the internet. It is used when non-automated tasks are executed, such as allocating images, searching information, or writing texts. The challenge is to maintain the quality of the work results on a constant high level. Now, this is achieved by a quality management system developed by KIT.

Also in times of constantly increasing computing power, people are indispensable for executing certain tasks. Such tasks include activities that cannot or can hardly be automated. Examples are the setting up of texts and product descriptions, translations, web searches, or the indexing and classification of images and videos. If the tasks are very extensive, they can be split up into individual so-called microjobs and transferred to parallel processing by several workers. This is referred to as paid crowd sourcing. On web portals, interested freelancers, the so-called crowd workers, can register. Depending on their qualification and area of interest, they can select tasks and process them in a temporarily and spatially flexible manner. The results of the jobs executed are compiled by the portal supplier and transmitted to the client.

"Before the individual results of the microjobs executed are compiled again, it must be ensured that they comply with the quality standards required. This is a big challenge, as the contributions of the individual crowd workers in a crowd sourcing scenario can be controlled to a limited extent only," says Robert Kern. "This is where our quality management system starts to work. Its approach: We combine the

contributions of several crowd workers by means of [statistical methods](#) and derive the quality of the work rendered from the degree of the contributions' agreement and, thus, ensure the required quality of the overall result." The instrument developed by KIT is already applied in cooperation projects with industry, for instance, with the leading crowd sourcing supplier clickworker.com.

A people cloud, i.e. all crowd workers, can supply a large spectrum of expertise and creativity to a company. The companies also consider the speed, scalability, and reduced fixed costs of project execution to be of crucial importance. Crowd workers appreciate the high variety of tasks and spatial and temporal independence in earning auxiliary income. The remuneration of the crowd workers depends on the processing expenditure and complexity of tasks.

More information: More information on the people cloud project: www.ksri.kit.edu/PeopleClouds

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