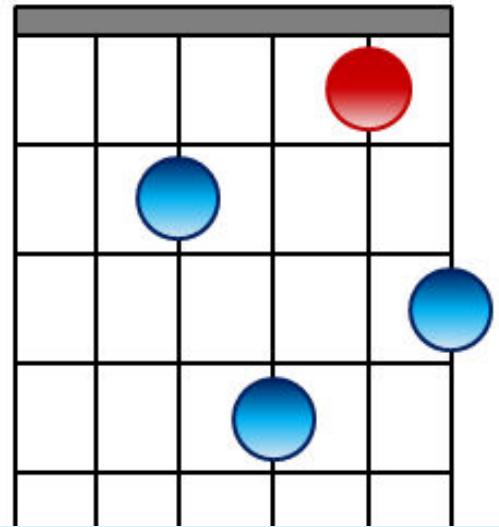# PROJECT FACTSHEET

aCCoRdO

Optimizing human effort in complex crowdsourcing

Inspiration

Crowdsourcing is one of the most promising new forms of computation, using human crowds for the mass production of tasks and services. Nevertheless, current crowdsourcing approaches assume the existence of an endless, anonymous and fully replaceable crowd, which brings several disadvantages. These include the non-optimal utilization of the available crowd by placing unnecessary effort on the human element (e.g. assigning multiple workers per task to address quality concerns), limiting current applications to simple, low-complexity human tasks and the omission of human factors such as worker interests and motivation.

Innovation

Complex tasks like product design or knowledge synthesis, which necessitate higher-level skills such as judgment ability, expertise or decision-making, suffer from the "replaceable crowd" assumption. Since the number of people who can handle complex tasks is inevitably smaller, complex tasks necessitate smarter worker selection, accounting for human factors to sustain motivation and designing advanced, efficient algorithms to optimize human contributions and avoid "burning out" expert resources.

The goal of the aCCoRdO project is to optimize the use of human effort in complex crowdsourcing. The project focuses on two main research axes:

- user profiling and human factors, where we seek to extract, quantify and model the worker characteristics that are important for the accomplishment of complex tasks
- coordination, optimization and workload balancing algorithms, where we try to incorporate the identified human factors into algorithms that optimize the human contributions inside the crowdsourcing process

Impact

Crowdsourcing, especially for complex tasks, is the future of internet-based service provision. The results of the aCCordO project, which focuses on optimizing this process, will thus help provide better crowdsourcing services that involve decision-making, knowledge production and collaboration. Examples of services where the project's original use cases can be generalized (for use by public or private stakeholders) include crowdsourced e-government, citizen science and journalism, among others.

Partners

Protolab, Human-Computer Interaction Institute, Carnegie Mellon University (US)

Contact

5, avenue des Hauts-Fourneaux
L-4362 Esch-sur-Alzette
phone: +352 275 888 - 1 | LIST.lu   © Copyright April 2024 LIST

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