**Spatial Crowd Sourcing: Worker and Task assignment for normal and abnormal state changes**

Crowdsourcing depends on a large number of skilled workers who are needed to accomplish spatial tasks. This has been an active area of research and is gaining wide popularity now. Most of these tasks can be completed online due to convenience, but this method fails when there is a need of completing a task at actual physical locations. This has led to a new area called spatial crowd sourcing that consists of location-specific tasks that require people who can accomplish them to physically present at specific locations. The tasks which require specific skillsets, completion times or other constraints have to be matched with workers who can meet these constraints and complete them. In this report we consider a situation where the jobs at different locations with sequential sub-tasks, each with time and skill constraints have to be completed within the given interval by workers who have those skills and are dispersed in different locations. The main goal of this project is to finish as many tasks in the given environment of jobs and workers as possible before a final cap time. First workers are assigned to tasks appropriately so that each of the tasks are allocated to workers who can complete these tasks. After the assignment is complete, a variant of the vehicle routing problem called vehicle routing problem with time windows (VRPTW) is used to assign the workers the paths that they need to follow to reach specific task locations and finish them within the required time intervals. The vehicle routing problem with time windows (VRPTW) is a generalization of the vehicle routing problem where the service of a customer can begin within the time window defined by the earliest and the latest times when a service can start. We also consider the case when a worker cannot reach a particular task location in an abnormal situation and perform a fast re-assignment amongst workers and tasks related to this task given their constraints. By following these approaches, we aim to create a technique that can be applied to many real-world problems in the spatial crowd-sourcing environment with such practical situations.