

A Study on evacuation simulation for evacuation assistance to vulnerable people

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Recently, many patients in a hospital are threatened life by fire disaster. Because many patients like vulnerable people have more evacuation problem than ordinary person. So a patient who can escape by oneself with walking assistance device like crutches or wheelchair and another patient who can't escape by oneself are should be supported safety technologies and service. Earlier research of 'hospital evacuation' led by actual experiments or computer evacuation simulation. Actual experiment is effective to gain credibility of result but it is difficult for patients to experiment repeatedly and it requires consideration for spatial problem and economic problems. Although computer evacuation simulation has been used to solve these problems, almost have concluded only results based on velocity without evacuation device.

In this study, evacuation results with support device application or not are analyzed used by computer evacuation simulation based on MAS(Multi Agent System). As a result, it is drawn through proof of efficiency of evacuation device in the vertical space like stairs that can improve the evacuation plan for vulnerable people in the hospital.