Purpose  With dementia’s disease, this risk for wandering not only increases family burden and caregivers but it also reduces the independence of the person with the disease. The effective way to keep the cognitive ability is suggested by keeping the cognitive impairment them in the social relationship with the others. But it has difficulty because of the family relationship has changed, so individual has less time for other relatives, friends and family. Based on the social background, agent service which assists the dementia people has provided. For example, Pollack has proposed the conversational humanoid agent for people with dementia. This system recommends individual’s daily plan using AI-management technology. However, existing research/technology does not approach to assist with dementia based on whose current context (e.g. time and location) as far as we know. If agent service could assist using based on the current individual’s context, it will increase the independence for people with dementia.

Proposal  In this research, we propose the memory aids service based on time and location for people with dementia. The service consists of three services, location detection service, forget-things registry service and agent service. This service aims to assist the individual based on individual’s context (i.e. schedule and current location). Moreover, this service could interact with a conversation for example if the person goes to the hospital the service assists that “Do you have proof of insurance?” and so on. Following we describe each feature of services. The location detection service aims to find where the dementia is in the home. So using such information, we can provide the suitable information for the location where the dementia people move. This service obtains the rough individual’s location information using some electronic device, so as to detect where the dementia people are in the house. So the sensor should easily to take a log at short intervals, but it does not require the high accuracy. Secondly, forget-things registry service which stores the usual schedule for the people with dementia. So, the caregivers or families could register the schedule such as daycare. Moreover, they register the information when the dementia people go out. Based on the registered information, the service reminds not only notify the schedule, but also could prevent from wandering around in the midnight. Finally, agent service enables people with both voice and text interaction that enables to easily understand and confirm to prevent forget-things. Concretely speaking, when the individual goes to hospital, the service displays the list of forget-things (e.g. insurance, wallet) on the screen and also confirms to the individual with a voice. Result  In this research, we have designed the memory aids service framework based on the location and time for people with dementia. Our proposed service consists of three services, location detection service, forget-things registry service and agent service.

References