

A Festival Event Sharing Agent running on MHAP for Person's Moving Line in Festival Site

Eungnam Ko¹, and Soongohn Kim² (Corresponding Author)

¹ Division of Information & Communication, Baekseok University,
115, Anseo-Dong, Dongnam-Gu, Cheonan, Chungnam, 330-704, Korea
ssken@hanmail.net

² Division of Computer and Game Science, Joongbu University,
101 Daehakro, Chubu-Meon, GumsanGun, Chungnam, 312-702, Korea
sgkim@joongbu.ac.kr

Abstract. Currently, the regional local festivals, which are a part of community development projects that utilize the regional cultural resources of the local self-governing entities, contribute in the nurturing of local cultures. This paper describes a FESA (Festival Event Sharing Agent running on MHAP). It is a multi-agent based MHAP with function of an event detection and classification for person's moving line in festival site automatically. It consists of FEDA and FECA. FEDA has a function of event detection running on MHAP. FECA has a function of event classification running on situation-aware ubiquitous computing such as MHAP. (Key words: regional local festivals, festival event sharing agent, person's moving line, MHAP)

1. Introduction

The smart festival management system is a management system that, for the various festivals that are operated by the local self-governing entities and agencies, enables a direct operation of all the process phases from the advance preparation phase to operation phase and the post management and the administrative tasks, etc. of the planning operational headquarters and agencies [1]. With the rapid development of multimedia and network technology, more and more digital media is generated [2, 3, 4]. Although the situation-aware middleware provides powerful analysis of dynamically changing situations in the ubiquitous computing environment by synthesizing multiple contexts and users' actions, which need to be analyzed over a period of time, access control in using multimedia shared object causes a problem of the seam in the ubiquitous computing environment.

Thus, there is a great need for event sharing agent in situation-aware middleware to provide dependable services in ubiquitous computing. This paper proposes a new model of festival event sharing agent running on situation-awareness ubiquitous computing such as MHAP.

2. MHAP Environment

As shown in figure 1, MHAP has four layered architecture [5]. The physical device and network layer consists of any network and physical device supporting any networking technology. The infrastructure layer introduces infrastructure to provide service management and deployment functions for MHAP services. The MHAP layer consists of MHAP services and provides functionalities constructing HA, which includes event notification, appliance control, HA rule configuration and device management. It uses MOM to support event-driven HA in heterogeneous environment. Facilitating Home Automation needs many different kinds of applications. There are DOORAE agent layer between application layer and MHAP service layer.

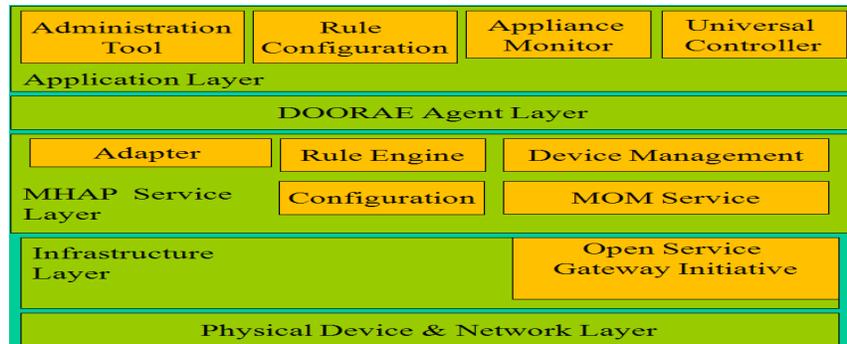


Fig.1.The organization of MHAP

Nowadays multi-agent systems establish a major research subject in distributed artificial intelligence. In particular, multi-agent modeling makes it possible to cope with natural constraints like the limitation of the processing power of a single agent or the physical distribution of the data to be processed and to profit from inherent properties of distributed system like robustness, fault tolerance parallelism and scalability [6].

3. Our Proposed Approach: Festival Event Sharing Agent based on MHAP

3.1 The Environment for Festival Event Sharing Agent: DOORAE

DOORAE services have many agents. They consist of AMA(Application Management Agent), MCA(Media Control Agent), ESA(Event Sharing Agent), SMA(Situation-Aware Session Management Agent), and ACA(Situation-Aware Access and Concurrency Control Agent).

Our proposed model aims at supporting a new festival event sharing agent in situation-aware middleware such as MHAP. SMA monitors the access to the session and controls the session. It has an object with an various information for each session and it also supports multitasking with this information. SMA consists of Global Session Manager (GSM), Daemon, Local Session Manager (LSM), Participant Session Manager (PSM), Session Monitor, and Traffic Monitor. GSM has the function of controlling whole session when a number of sessions are open simultaneously. LSM manages only own session. GSM can manage multiple LSM. Daemon is an object with services to create session. As shown in Figure 2, you can see the single session relationship among a ESA, GSM, LSM, PSM and the application software on LAN for festival sites. Platform 1 consists of GSM, Session Monitor, and Traffic Monitor. The other platform consists of Daemon, Local Session Manager and ESA. Each platform except platform1 has an ESA. ESA is an agent that plays a role in detecting an event and classifying it. ESA informs SMA of the results of detected events. Also, ESA activates an event in application software automatically. It informs SMA of the result again.

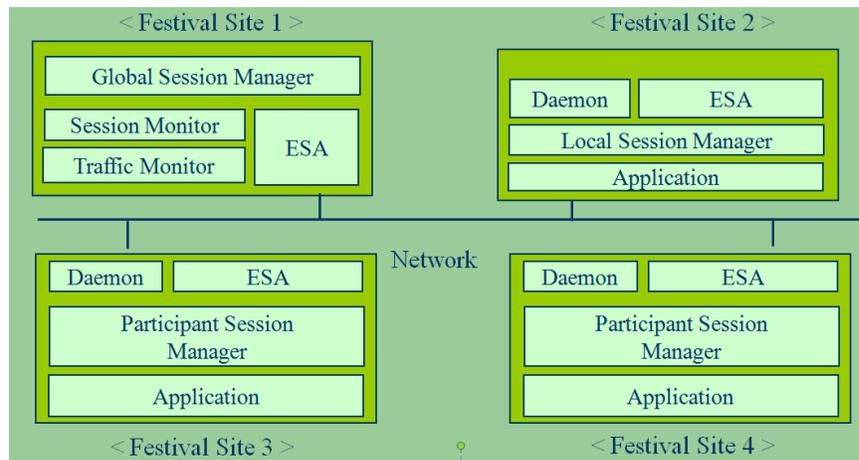


Fig. 2. ESA for Festival Sites

3.2 The Algorithm for Festival ESA

A festival event and application program sharing windows perform process communication of message form agent in situation-aware middleware such as MHAP. In the middle of this process, there are couple ways of snatching message by event and application sharing agent. The roles of festival ESA (event and application program sharing agent in situation-aware middleware such as MHAP) are divided into two main parts; Abstraction and sharing of view generation. Event and application program sharing must take different from each other according to number of replicated application program and an event command. This proposed structure is distributed architecture but for event and application program sharing, centralization

architecture is used. Event and application program sharing windows perform process communication of message from agent in situation-aware middleware. In the middle of this process, there are couple ways of snatching message by event and application sharing agent. Festival ESA informs SM of the results of detected events. Also, festival ESA activates some failure application software automatically. It informs SM of the result again. That is, festival ESA becomes aware of an event occurrence after it receives requirement of UIA and transmit it. Festival ESA informs SM of the results of detected events.

4. Conclusions

The focus of situation-aware ubiquitous computing has increased lately. An example of situation-aware applications is a multimedia person's moving line for festival sites. The development of multimedia computers and communication techniques has made it possible for a mind to be transmitted from one festival site to another festival site in distance environment. This paper proposed a new model of festival event sharing agent running on situation-awareness ubiquitous computing. Festival ESA is a system that is capable of sharing software event for distributed multimedia environment running on situation-awareness ubiquitous computing. We have given a detailed discussion of festival ESA, a suit of an event sharing system that ensures the continuous applications. In this paper, we have discussed a method for enhancing performance through a quick festival event sharing for distributed multimedia environment running on situation-awareness ubiquitous computing.

References

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