A Study of the Interoperability Service Framework for Bluetooth and Jini

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ABSTRACT

With the Internet and advanced technologies gaining ground, the IAs (Information Appliances) are increasingly popular. Although there are various IAs to provide services for people, sometimes they can not share the services with each other because of the different communication protocol, such as Jini and Bluetooth. Jini technology is an open architecture that enables developers to create network-centric services and makes the services have auto-discovery capability. Bluetooth technology works on the hardware that complies with the Bluetooth wireless specification. It enables to auto-discovery and link among portable devices and connects to the Internet. However, Jini and Bluetooth services can not communicate with each other because they lack a standard interface and common protocol. Thus, this research studies Jini and Bluetooth technologies to design a standard interface and builds a interoperability service framework to bridge the gap between Jini and Bluetooth. The proposed framework enables to exchange the services between these two technologies and provides for developers to create a Jini-Bluetooth service gateway rapidly. Therefore, a Jini-Bluetooth service gateway based on the proposed framework is designed and implemented as a proof-of-concept example of this research.

Keywords : Bluetooth, Jini, service framework, service information, service exchenge

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