Abstract

Smartphone ad-hoc networks have been deployed for communication where infrastructure based communications are not available (or desirable). Android OS ad-hoc networks can be employed in development of collaborative applications such as entertainment systems and mobile gaming. In addition, they facilitate ubiquitous computing in areas such as home applications where wireless sensors and actuators are embedded in consumer electronics.

This paper presents an implementation of Service Discovery middleware for Android Mobile ad-hoc networks. The implementation overlays a Mobile Ad-hoc Network implementation. It further describes a routing implementation that is based on the Ad-hoc On-Demand Distance Vector protocol, with modifications to reduce control message overhead. An implementation of a Semantic approach for description of services on mobile devices, that facilitates semantic service discovery in Android OS Mobile Ad Hoc Networks is also presented. The implementation was tested by simulating the routing implementation. An Android based prototype was developed and tested on a range of devices.
Service Discovery in Mobile Ad-Hoc Networks of Android OS Devices

References


Index Terms

Computer Science  Wireless

Keywords

Mobile ad hoc networking (MANET), Service Discovery in MANETS, Smartphones, Android OS