

ABSTRACT

Android based Voice Call Processing Application for Mobile Devices

Android is a new mobile platform for mobile development, it has a rich set of application. Android OS has emerged as core of smart devices including mobile phones which offer utility based application development that can be plugged and played in user space level of the OS software.

The goal of this project is to develop a Voice Call processing Engine application using java. The main objective of the project is to use Wi-Fi Direct and voice call facility between a pair of user. The short-range communication facility of the processing engine allows two peers to talk to each other directly by using android mobile devices without any access point. The processing engine for voice call has been designed and developed that uses the Android kernel services to enable the session based channel setup for voice calling data communication. The framework of the protocol suit proposed are equipped on top of Wi-Fi Direct based communication paradigm, which implements successfully the half duplex communication. Over the framework the processing engine runs to facilitate voice based call services within the reachable range offered by hardware capability of the Wi-Fi Direct interface in the mobile device.

The development was carried out in Java Programming Language using Eclipse Integrated Development Environment (IDE). Development has been carried out using Android Emulator and the Android Development Tools (ADT) plug-in. Two Samsung Galaxy Duos star Pro phone based testing has been successfully done in-house.

This project was mainly targeted to acquire ideas on Android applications development using Java and Eclipse. The project was successfully carried out and was completed within the schedule. Despite being available for use, it needs further modification in terms of full duplex communication facility for call processing.