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# Design and Implementation of Contact Control Smart Phone Application

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## Abstract

In the recent years, as smart phones popularized, the number of people who use IMS (instant messaging service) and SNS (social network service) rapidly has increased as the usage of SMS (short message service) relatively decreased. That is why this thesis suggests a contact control service based on Android. It contains an inducing function that calls acquaintances, which were given a score based on the level of familiarity from saved contacts and call logs. And it provides an overall ranking of call log in order to grasp frequently called people. This developed system was tested on Samsung Galaxy S2 and LG Optimus LTE / Android 2.2 which were the main smart phone models.

**Key words:** Social Network, Android, User Connection Management

## 1. INTRODUCTION

Recently, as the smart phones got popularized worldwide, the usage of SNS (social network service) based on Smart phones rapidly increased than the usage of SMS (short messaging service) service. Since SNS is an online service which is provided from websites that focus mainly on organizing social relationships or social networking, SNS allows the users to share their interests, activities, experiences, and real life stories. Most of the SNS is provided based on websites and provides an interaction between the users in forms of emails and instant messaging service (IMS).

Social Network or basic functions of services that build social relationships connect users who have signed up for the service together, or form members of a certain group. Using these services, Facebook uses "Like" service to understand which users prefer which product, service, and contents. Not only Facebook grew by opening the social relationships created with the Social Network services, to

the third party, Facebook also successfully created a business model. In 2011, Facebook announced SDK 3.0 and provided a combined development environment in order to develop mobile app within Android mobile platform focusing on core concept such as Social Design, Social Channels, Social Plug-in, Login, Open Graph, and Dialogs.

In this study, it developed a Smart Phone app based on Android operating system that analyzes relationships with using saved records of messages and calls, shows the analyzed data in a form of graph and eventually allows the users to organize the contacts better.

## 2. CONTACT CONTROL SERVICE BASED ON ANDROID

### 2.1 Overall Construction of Service

The start of Android began on July, 2005 with Google taking over a small Android company in Palo Alto, California. On November 5th, 2007, Texas Instruments, Broadcom Corporation, Google, HTC, Intel, LG mobile, Marvel Technology Group Ltd., Motorola, NVIDIA, Samsung Group, T-mobile and other companies formed a consortium, OHA (Open Handset Alliance). The first mission of OHA was to develop a public standard of mobile

devices. Also, OHA announced Android, their first result of mobile devices platform, which was built in the Linux Kernel 2.6. On November 21st, 2008, the first Android was announced to be an open source. Google opened up the full source code, Apache License, which included network and telephone stack. On December 19th, 2008, ARM Holdings plc, Atheros Communications, Asus, Garmin Ltd., soft bank, Sony Ericsson, Toshiba, and Vodafone started to participate in Android project. The following figure 1 shows the construction of Android.

There are 3 main parts of Contact Control Service based on Android. The first function is a function that rates calls. This function shows the top 5 contact members who have the most calls received or called based on the call logs. It also provides a personalized call time, normal calls, or sending texts when selected and it shows the overall rating by a circle graph.

The second function is a function that controls friend list. This function gives scores after reconstructing data based on call logs and contacts of user's Smart Phone, allows the users to give individual scores, and finally, it helps the users to organize the contacts by familiarities registered in the Contact. This function also provides individual calls, texts, and detailed contact information.

The third function is a function that controls Facebook. The function synchs with Facebook to show who commented on user's statues, and who posted on the user's wall at a look. Utilizing this function, it is possible to see who has a higher interest in the user's Facebook activity.

## 2.2 Detailed Activities of each functions

This chapter will explain about activities and materialization results of the developed service. It internally analyzes call volume based on call logs from Smart Phone database, and provides the information to the users.

It also internally analyzes and reorganizes call logs and contacts from Smart Phone database and provides the reorganized information to the users. It also requests data from Facebook-Server through Facebook Manager and provides the data to the users after analyzing and reorganizing.

## 2.3 Materialization and Results of Service

The service was designed clearly by fully utilizing Android UI in order to reduce repulsion for users using applications for the first time. It was designed as directly as possible in order to make it convenient to use, and show to all information at a look.

## 3. CONCLUSION

In this thesis, it suggested a Contact Control Service based on Android. The developed service utilized Android UI Framework in order to show information directly at a look. Using Galaxy S2 of Samsung, Optimus LTE and ANDROID 2.2 of LG, this service has been proven its own performance and also proved to have no problem in bring Data from Smart Phone. In order to materialize extra functions to this service, studies about application and SNS data analysis based on Android are continuing.

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