ANALYSIS OF DROP CALL RATE OF A TYPICAL MOBILE COMMUNICATION

This thesis is prepared for one part of the award to get the Bachelor of Engineering (Hons) Electronics (Communication)



MUHAMAD LUQMANUL HAKIM BIN MOHD TAIB FACULTY OF ELECTRICAL ENGINEERING UNIVERSITI TEKNOLOGI MARA (UiTM) 40450 SHAH ALAM SELANGOR DARUL EHSAN MALAYSIA

ACKNOWLEDGEMENT

With the name of Allah swt, Most Gracious Most Merciful

Alhamdulillah, a lot of thanks to Allah swt for His wills and blessing, lastly I successfully completed my Final Year Project for my first Degree of Bachelor of Engineering (Hons) Electronics (Communication).

I would like to expose my sincere gratitude to my project supervisor Assoc. Prof. Norhayati Binti Ahmad for her continous guidance, support and encouragement throughout this research. And also not forget her patience, motivation, enthusiasm and immense knowledge on guiding me towards the completion of this project.

In the end, I also would like to wish thanks to all my family members, not forgetting my fellow coursemates who always keep on supporting me throughout my life. This project has really teaching me about patience and make me want to continue learning about this subject and project. All your contributions are very much appreciated.

ABSTRACT

This Final Year Project presents a ANALYSIS OF DROP CALL RATE OF A TYPICAL MOBILE COMMUNICATION that use to be as the one of the new database for the future engineer. The construction of the system to create this system is PHP as the server-side scripting languages. This is because PHP is advance in linking with other kind of coding from other software. Apache or Wamp Server is used the server side. HTML is used for the words on the interface and CSS for the graphic, shape, colour and others. For the development application, notepade++ is very suitable and MySQL as my database in this project or system. To open the system the we also can used google chrome as web browser. The database for the project is obtained from Maxis. System is user friendly system new engineer enable to have important data from past by clicking the system any time. This system save a lot of engineer's time because all the data can be uploaded to this system by authorize person only such as technician. Keyword - Cell Name, Transmision Channel Drop (TCH Drop), Transmission Channel Call Success (TCH Success), Transmission Channel Drop Percentage (TCH Drop %) and also Transmission Channel Busy Hour Time (TCH Busy).

TABLE OF CONTENTS

CHAPTER	LIST OF TITLE	PAGE
1	INTRODUCTION	1 - 6
2	LITERATURE REVIEW	7 - 16
3	METHODOLOGY	17 - 24
4	RESULTS AND DISCUSSIONS	25 - 64
5	CONCLUSION	65 - 66
6	RECOMMENDATIONS FOR FUTURE WORK	67
7	APPENDIX	68 - 78
8	REFERENCES	79 - 80

CHAPTER 1:

INTRODUCTION

A mobile phone signal (or reception) is the signal strength (measured in dBm) received by the mobile phone from the cellular network (on the downlink). Depending on various factors, such as proximity to a tower, obstructions such as buildings or trees, etc., the signal strength will vary. Most mobile devices use a set of bars of increasing height to display the approximate strength of the received signal to the mobile phone user. Traditionally five bars are used; see five by five.

Generally, a stronger mobile phone signal is easy to obtain in an urban area, though urban areas do have some "dead zones" where no reception can be obtained. Since cellular signals are designed to be resistant to multipath issues, this would most likely be due to blocking by a large building such as a high-rise. On the contrary, many ruralor minimally inhabited areas lack a signal or have a very weak fringe reception; many mobile phone providers are attempting to set up towers in parts of these areas most likely to be occupied by users, such as along major highways.

In telecommunications, the dropped-call rate (DCR) is the fraction of the telephone calls which, due to technical reasons, were cut off before the speaking parties had finished their conversation and before one of them had hung up (dropped calls) This fraction is usually measured as a percentage of all calls.

A call attempt invokes a call setup procedure, which, if successful, results in a connected call. A connected call may be terminated (disconnected) due to a technical reason before the parties making the call would wish to do so (in ordinary phone calls this would mean before either of the parties has hung up). Such calls are classified as dropped calls. In many practical cases this definition needs to be further expanded with a number of detailed specifications describing which calls exactly are counted as dropped, at what stage of the call setup procedure a call is counted as connected, etc. In modern telecommunication systems, such as cellular (mobile) networks, the call setup procedure may be very complex and the point at which a call is considered successfully connected