UNIVERSITI TEKNOLOGI MARA

NETWORK PERFORMANCE EVALUATION OF SELECTED VOICE CODEC USING OPNET

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NOVEMBER 2010

ACKNOWLEDGEMENT

In the name of Allah, who is the most, Most Merciful and Him alone is worthy of praise. Alhamdulillah, with His bless, I am able to complete this project with full effort and within the time constraint given to me.

First and foremost, I would like to take this opportunity to express my sincere appreciation and gratitude to my supervisor, Pn.Shapina Hj Abdullah, for her invaluable guidance, encouragement and constructive criticism and suggestion on the project. Her encouragement and patience has enabled me to complete this project in time.

My Heartfelt thanks and appreciation also goes to Pn.Nik Mariza Nik Abdul Malik, for her guidance, encouragement, comment, ideas and support in helping and giving me the information and knowledge needed to complete this project. To all lecturers in Faculty of Computer and Mathematical Sciences, thanks for the dedication, efforts and support in sharing valuable knowledge. I am so grateful to have this opportunity to learn and gain experience doing this project from such a skilled and talented lecturer.

Last but not least, my special appreciation to my parents for the love, moral support and encouragements. Finally, a special word of thanks to all my friends for giving the support and help me in any way at all. I wish them best of luck and thank you for everything. To all mentioned here, may Allah bless all of you.

ABSTRACT

Voice Over Internet Protocol (VoIP) is a relatively new technology and it has already achieved wide acceptance and use. It has so far proved to be a good candidate for replacing the POTS (Plain Old Telephone System). It, of course, has drawbacks along with the numerous advantages it brings and one of it is coding and compression which is the codec. Codec are not only used for compression, but also for encoding, which, is the translation of analog voice into digital data that can be transmitted over IP networks. The quality and efficiency of the compression software therefore has a big impact on the voice quality of VoIP conversations. Using three widely use codec; performance evaluation of these codec had been made to make better understanding of the major characteristics of the codec to improve the quality of voice services. Different performance aspects were investigated in this project including, average end to end delay, throughput and jitter. By using OPNET simulation software, the three codec were compared and analyzed. This project simulation results indicated that each codec performance were different according to performance metrics that had been selected.

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