

A Platform for Digital Reproduction Sound of Traditional Musical Instrument *Kompong*

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Abstract. This work proposes a system for the digital reproduction sound of *kompong*. The *kompong* sounds are represented by *bung* and *pak* produced by palm beating to the membrane. The sounds are recorded in an acoustical sound recording system. In this proposed system, the recorded sounds are then analyzed in a frequency analyzer SpectraPLUS. This frequency contents data can be used as the reference to check the reproduced digital sound. The recorded wave data is converted to MIDI format before being manipulated in Ableton synthesizer system to create modern keyboard notes but representing *kompong* sound. For the validation purpose, a subjective approach as an additional to the objective comparison with frequency contents is also proposed.

Introduction

Kompong is one of traditional musical percussion instruments that can produce sound by beating the constrained membrane with palm hand (see Fig.1). The sheet of the membrane (*belulang*) of traditional *kompong* can be made of goat or cow skin, while the cylindrical frame (*baluh*) is made of wood. Rotten tie is used to tight the sheet and frame.



Fig 1. Percussion instrument *kompong*.

Kompong has been played for decades in Malaysia especially in the state of Johor for celebrating the bride and groom in a wedding ceremony and used to announce the arrival of important guests [1]. Right now, not many young generations play *kompong*. In this modern life, this traditional musical instrument will be awkward to young generation. Using modern musical instruments and digital tools will be more convenient. Unfortunately, the *kompong* sounds are not available in any synthesizers. So, this research is carried out to make the digital sound of *kompong* so that *kompong* can be played in modern musical keyboard or synthesizer.