

## Introduction of KMITL's New Program "Music Engineering and Multimedia"

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I received my Doctoral degree from Tokai University in 2004 under supported from the Hitachi Scholarship Foundation. My advisor is Prof. Dr. Takenobu Matsuura. After graduating, I have been worked as an assistant professor at Faculty of Engineering, King Mongkut Institute of Technology Ladkrabang(KMITL). My main research interests are in pattern recognition, visual inspection, signal processing, and music informatics. Currently, I am also working as a vice president at KMIT'L. In 2012, I was assigned from the faculty to be a head of a project to open a new curriculum, "Music Engineering and Multimedia". In 2014, we have launched the new and first engineering program in Thailand, "the bachelor degree of engineering in Music Engineering and Multimedia".

In the past decade, the entertainment industry in Thailand has undoubtedly enjoyed a rapid growth as well as played an important role on the societal level through the internet and the social media community. As a result, the growth of the IT industry is similarly fueled in parallel by the Digital Multimedia content. The ASEAN Economic Community or AEC in 2015 will expand the consumer market to the size of over 600 million. The competition of the regional entertainment industry will become more intense in order to capture the potentially increased market share. Thailand, a major country in ASEAN, rightfully deserves to become the entertainment industry and innovation hub of ASEAN. Thailand posse many advantages over her counterpart, for example, the central location, cultural diversity, expertise, credibility, the ability of the entertainment industry in production to the diverse markets, as well as a range of products (music, advertisement, films, games and animation) ready to enter the international markets.

According to the study by Thailand Creative & Design Center (TCDC), the overall Thai entertainment industry is valued at around 35 billion baht per year. The enormous value can be divided into 20 billion baht in music labels industry, 6.5 billion baht in radio station for music and entertainment, 5 billion baht in audio and music equipment business, 2 billion baht in light and sound business and 300 million baht in music school business. The trend of growth in the music and entertainment industry is 10% and more each year. Most importantly, the game and animation industry is in 2010 valued at 22 billion baht per year compared with 17 billion baht per year in 2008. The significant growth clearly indicates that this industry is an important growth engine of the Creative Economy of Thailand.

In preparation to reach the goal of Entertainment Industry and Innovation Hub of ASEAN is a capacity building and production of qualified graduates to support the future of growth of the market. At present, there is currently a lack of personal in the field both on the frontend and backend. In response to the situation, the Faculty of Engineering, KMITL, deems it is necessary to develop the curriculum of Bachelor of Engineering (B.Eng.) degree in Music Engineering and Multimedia. The aim is to produce the engineers who can analyze, synthesize, design, apply the engineering discipline and innovate in the music and multimedia technology. Most of all, this curriculum is specifically tailored to suit the educational approach of the 21st century. We emphasize the 'Teach Less Learn More' rationale. Furthermore, the curriculum takes stride in the multi-disciplinary approach in applying the knowledge in electrical, electronics, communications and IT to the artistic aspect, that is, music, light, color and sound, as well as the graphics and animation

altogether. Besides the essential theoretical component, the practical side is emphasized both on campus and in the industry, both domestic and international environment before the graduation, particularly, through the Cooperative Education program.

This curriculum is the first in Thailand. The preparation of the Music Engineering and Multimedia curriculum at Faculty of Engineering, KMITL will undoubtedly increase the potential of Thailand as a major drive to become a hub in Entertainment Industry and Innovation in ASEAN. Additionally, the competitiveness of Thai higher-level education is enhanced.