

**Universiti Teknologi MARA**

**Dynamic-Based Server Side Content  
Adaptation Using Content Switching  
Approach**

**Mahasan Isa**

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## ABSTRACT

Nowadays, most of the e-learning portal only accessible using limited access tool such as PC, laptop and workstation. This will limit the access to e-learning portal. With the advancement of mobile devices such as mobile phone and Personal Data Assistant (PDA), the web researcher found that it is necessary to extend the accessibility of service via these communication devices. However, these devices have several constraints such as small screen size, limited processing power and limited screen color. In this dissertation, we propose a novel server based content adaptation architectures using content switching technique that capable to support a dynamic adaptation in handling a huge number of concurrent requests for transcoding and downloading video files. A series of testing was conducted to justify that the network architecture is workable and able to achieve high computing performance with good network reliability and service availability. Based on findings, we can conclude that using content switching technique, the amount of time for data to travel from mobile device to server is smaller for the process of transcoding and downloading video files.