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| **Project Title:** | SIP-based Mobility Management in Next Generation Heterogeneous Networks |
| **Project No.:** | RG003-09ICT |
| **Principal Investigator:** | Dr. Chow Chee Onn |
| **Co-researcher (s):** | 1) Prof. Dr. Kaharudin Dimyati<br>2) Dr. Jeevan Kanesan<br>3) Mr. Soroush Naeimi<br>4) Mr. Tham Mau Luen |
| **Project Duration:** | 1 April 2009 – 2 June 2011 |
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**Abstract:**

The general definition of Next Generation Networks (NGN) includes the ability to utilize multiple broadband technologies and to support generalized mobility, according to the ITU-T. NGN must integrate several IP-based access technologies in a seamless way, especially in supporting multimedia applications. To answer this issue, we investigate on the management system of various network standards and design an intelligent system to seamlessly support the handover of multimedia applications over heterogeneous network. The SIP-based multimedia applications are the main focus of this project since SIP (Session Initiation Protocol) is amongst the most popular protocols used in supporting multimedia applications over various platforms. Considering the differences in the network standards, this mechanism takes into consideration the constraints in the network resources (bandwidth and delay) and adaptively adjust the multimedia applications accordingly to the network conditions. Furthermore, to demonstrate the feasibility of the proposed mechanism, a heterogeneous network testbed will be constructed to perform practical SIP-based multimedia transmission over heterogeneous network scenario. With the proposed algorithm, we maintain on-going SIP-based multimedia session (video streaming, VoIP (voice over IP) and etc.) seamlessly when network availability changes due to node movement