

## **Performance evaluation of mobile ad hoc network based communications for future mobile tele-emergency system**

### **Abstract**

Sparked by awareness of the limitations to provide medical services in remote areas, researchers have perceived that developing telemedicine systems is inevitable. In most cases very remote areas and disaster struck areas lack telecommunication infrastructure. Telemedicine system operating in such areas must have advanced wireless technology supporting it in devastating situation, hence it is called as tele-emergency system. Our approach is on MANET combined with Mobile IP and MIPv6, is the basis of infrastructure for the mobile tele-emergency system. The tele-emergency system requires data, voice and video transmission in its network. In this investigation, evaluation is based on simulation of the various ITU-T standard CODECs of VoIP and video transmission over MANET using discrete event simulator NS-2. The results of simulation showed that ITU-T G723.1 worked well in the MANET environment than the other CODECs for VoIP in fixed and mobility tele-emergency environments. From the simulation of video CODEC performance evaluation, it was observed that H.263 performed to a great extent in random small scale environment and also in multiple video flow of 57.6kbps speed video transmission. © 2007 Asian Network for Scientific Information.