New Trends of Mobile Health (mHealth) and Secure Integration with Electronic Health Records (EHR)

Krishna Sindhuja Kalusani

USC ID: T25568677

A common electronic device that gained popularity and still evolving enormously day to day is mobile phone. The extent of technology of mobile phone has now reached the health services department. Mobile health refers to the use of mobile devices to improve the quality of health care. In recent times, the extent to which mobile phones are used in health care sector has increased. Integrating mobile health with electronic health record is the new preferred method to store a patients' health records. But with the increasing facilities with mobile phones increases the vulnerabilities. Several security properties need to be satisfied to make the integration practical, such as data privacy, fine-grained access control and scalable access between different clouds. As we are dealing with health care which involves very sensitive data, security is the major concern. In the talk presented by Dr.ChinTser Huang, mobile health technologies and applications are introduced first and the security concerns that can challenge the systems are presented. To overcome the security issues with mobile health applications, a secure and scalable framework for EHR data sharing is presented. This framework requires combining Identity-based Encryption and Attribute-based Encryption together to enforce a fine-grained access control scheme on EHR and to enable scalable access between multiple clouds.