

ABSTRACT

Nowadays many people travel outside their country for their own businesses, but they still want to be communicating freely. It caused an increasing demand for communication among countries, that a development of communication among countries, usually called International Roaming is needed. International Roaming is an ability of cellular users to automatically make or receive a call, send or receive data or accessing other services, including data services, when they are travelling outside their former cellular geographical area and network location that have been registered, to use the network of other country which visited.

This Final Project is discussed about *outbound roamers* performance analysis between Indonesia and Saudi Arabia on Telkomsel Operator. Telkomsel has three International Roaming partners, i.e Al Jawal, Ettihad Mobily and Zain. The analysis covered about signalling process of outbound roamers between MSC with HLR, Location update problems, SMS MT and SMS MO. In this analysis a tracing of Telkomsel, as chosen operator, master claw in Jakarta is needed.

The succes transaction rate of Location update for each Operator is for Al Jawal: 78.13%, Ettihad Mobily: 56.80%, and Zain: 70.93%. For SMS MO on Al Jawal Operator is 23.93%, Ettihad Mobily is 22.69% and Zain is 16.13%. while for SMS MT transaction for each Operator is Al Jawal: 69.90%, Ettihad: 48.04%, and Zain: 67.87%. The Failure of those transaction are mostly caused by no MAP Error(Undefined), Illegal equipment, and absent Subscriber.

Keywords : International Roaming, outbound roamers location update master claw, no MAP Error (Undefined), Illegal equipment, absent Subscriber, SMS MT, SMS MO, MSC, HLR.