[Keynote Talk]: Formal Specification and Description Language and Message Sequence Chart to Model and Validate Session Initiation Protocol Services

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Abstract : Session Initiation Protocol (SIP) is a signaling layer protocol for building, adjusting and ending sessions among participants including Internet conferences, telephone calls and multimedia distribution. SIP facilitates user movement by proxying and forwarding requests to the present location of the user. In this paper, we provide a formal Specification and Description Language (SDL) and Message Sequence Chart (MSC) to model and define the Internet Engineering Task Force (IETF) SIP protocol and its sample services resulted from informal SIP specification. We create an "Abstract User Interface" using case analysis so that can be applied to identify SIP services more explicitly. The issued sample SIP features are then used as case scenarios; they are revised in MSCs format and validated to their corresponding SDL models.

Keywords : modeling, MSC, SDL, SIP, validating
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