Publishing Trickle ICE Capability Through Presence Information

Kiran Kumar Guduru *

**Lead Engineer, Samsung R&D Institute India - Bangalore, India*

kiran.guduru@samsung.com

***(Pt9)Abstract*—Interactive Connectivity Establishment is the process of establishing a transport connection between two peers behind Network Address Translators. To reduce the session setup delay with the existing ICE process, the concept of Trickle ICE is introduced. With Trickle ICE, peers can communicate individual ICE candidates immediately after gathering. The User Agents supporting this Trickle ICE feature, and initiating a communication session, has no information whether the remote peer will support Trickle ICE or not, resulting in the lack of information for backward compatibility. Presence information data provides a complete view of the communication capabilities of a User Agent. This data can describe different aspects of the user agent's communication capabilities like characteristics of device, physical location, ability to take part in a communication session, state of the user etc. This research work proposes a solution to communicate the capability of one peer, towards the support of Trickle ICE, to the remote peer through presence information and analyzes the number of signaling messages required for establishing a session between two peers. This work also analyzes the amount of bandwidth utilized using SIP as example signaling protocol through descriptive analysis method.**

***(Pt9)Keyword*—ICE, Trickle ICE, Presence, User Agent Capabilities, Peer to Peer Connection**

Kiran Kumar Guduru received M.C.A degree from Sri Venkateswara University in 2009 and currently pursuing his Ph.D under Visvesvaraya Technological University, India. He is working as a Lead Engineer in Samsung R & D Institute India, Bangalore PVT Ltd. He is a member of W3C WebRTC and IETF RTCWEB working groups since 2012. His research interests include reducing netwrok congestion in telecom signaling networks.