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  - Among my responsibilities as Executive Director, I act as the custodian of Internet-Drafts for the IETF and records relating to Internet-Drafts. I am familiar with the record keeping practices relating to Internet-Drafts, including the creation and maintenance of such records.
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- 9. Exhibit 1 is a true and correct copy of draft-rosenberg-sipping-ice-00, titled "Interactive Connectivity Establishment (ICE): A Methodology for Network Address Translator (NAT) Traversal for the Session Initiation Protocol (SIP)." The Internet-Draft shows that an announcement of its publication was made on February 24, 2003.

Pursuant to Section 1746 of Title 28 of United States Code, I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct and that the foregoing is based upon personal knowledge and information and is believed to be true.

Date: Sq+19, 2018 By:

Alexa Morri

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Interactive Connectivity Establishment (ICE): A Methodology for Network Address Translator (NAT) Traversal for the Session Initiation Protocol (SIP)

draft-rosenberg-sipping-ice-00

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#### Abstract

This document describes a methodology for Network Address Translator (NAT) traversal for the Session Initiation Protocol (SIP). This methodology is called Interactive Connectivity Establishment (ICE). ICE is not a new protocol, but rather makes use of existing protocols, such as Simple Traversal of UDP Through NAT (STUN), Traversal Using Relay NAT (TURN) and even Real Specific IP (RSIP). ICE works through the mutual cooperation of both endpoints in a SIP dialog. By having the endpoints work together in NAT traversal, a number of important properties are obtained. ICE always works, independent of the types or number of NATs. It always represents the cheapest solution for a carrier. It always results in the minimum

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voice latency. It can be done with no increase in call setup delays. It is far less brittle than STUN. ICE also facilitates the transition of the Internet from IPv4 to IPv6, supporting calls between dual-stack and v6 clients behind a 4to6 NAT. Preconditions can be used in conjunction with ICE, to guarantee that the phone never rings unless the users will both hear and see each other when they pick up.

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