IEEE 802ECSG
Privacy Recommendation

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| A Modest Proposal for Randomization of MAC Addresses |
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Abstract

This document describes a proposal for randomization of an 802.11 STA MAC address. This proposal is from document 11-14/0367r2.

### Procedure for 802.11 STA to randomize its MAC Address

When a STA is not a member of a BSS it should periodically change its MAC address to a random value. The period should be not more than 1 hour and should not less than 1 minute. When a STA discovers a BSS of interest and wishes to establish a connection it should again change its MAC address to a random value prior to establishing a connection to the BSS. Once connected, it shall retain that MAC address for the duration of its BSS connection.

STAs connecting to an infrastructure BSS should retain a single MAC address for the duration of its connection across an ESS. A PMKSA created as part of an RSNA connection will contain the MAC address used to create the PMKSA. A STA that supports PMKSA caching shall, if necessary, change its MAC address back to that value when attempting a subsequent association to the ESS using PMKSA caching.

To set a random MAC address, a STA shall assign it random 48-bit value and then shall set the sixth bit of the first octet to one (indicating a locally administered MAC address) and the seventh bit of the first octet to zero (indicating unicast).

To avoid leakage of possibly sensitive network identifying information, STAs should refrain from directed probing for preferred SSIDs and, instead, use passive scanning or wildcard probing.