IEEE 802ECSG  
Privacy Recommendation

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| Minutes of EC Privacy Recommendation SG Teleconference  October 1st, 2014 | | | | |
| Date: 1-October-2014 | | | | |
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Abstract

Minutes of the EC Privacy Recommendation SG teleconference on Wednesday, October 1st, 2014.

**Wednesday, October 1st, 2014**

Chair: Juan Carlos Zuniga

Recording secretary: Karen Randall

**Call to order**

* Meeting called to order on at 10:06am ET.
* The chair slides were posted:
* <https://mentor.ieee.org/privecsg/dcn/14/privecsg-14-0010-00-ecsg-oct-1-conf-call-slides.pptx>

**IEEE WG Guidelines**

* The chair read the IEEE guidelines and asked for declaration of Potentially Essential Patents.
  + No IPR issues were brought up

**Appointment of recording secretary**

* A call for an EC SG Secretary was made, but no one volunteered for the position
* Karen Randall volunteered to take notes
* No one opposed to recording meeting for keeping minutes

**Roll call**

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| --- | --- |
| **Name** | **Affiliation** |
| Juan Carlos Zuniga (Chair) | InterDigital |
| Mathieu Cunche | INRIA |
| Jouni Malinen | Qualcomm |
| Dan Harkins | Aruba Networks |
| Soo Bum Lee | Qualcomm |
| Philip Barber |  |
| Piers O’Hanlon | Oxford Internet Institute |
| Karen Randall | Randall-Consulting |
| Max Riegel | NSN |
| Dan Romascanu | Avaya |
| Rene Struik | Struik Security Consultancy |

**Agenda**

* Welcome
* Chair's slides
  + IEEE Slides
  + Call meeting to order
* Group's updates
  + Presentations and discussions at IEEE 802 interim meetings
  + IAB/IESG (IETF) – IEEE 802 coordination meeting
  + IETF MAC address randomization trial status
* Technical Topics
  1. Privacy Issues at Link Layer
  2. Threat Model for Privacy at Link Layer
  3. Proposals regarding functionalities in IEEE 802 protocols to improve Privacy
  4. Proposals regarding measuring levels of Privacy on Internet protocols
  5. Implications of MAC address changes
  6. Other
* Next Steps

**Review of minutes**

* No one objected to the proposal to record meeting for minutes
* Meeting minutes from the September 3 telecon meeting were approved with no changes

**Group’s updates**

* **Presentations and discussions at IEEE 802 interim meetings**
  + Juan Carlos provided an overview of the responses from discussions with other IEEE 802 WGs since the last Privacy EC SG telecom meeting
  + **IEEE 802.1**: There is an IEEE 802c proposed PAR for an amendment for local MAC Addressing, driven by deployment of equipment supporting virtual machines and Internet of Things (IoT) that could exhaust a global address space. The amendment will provide recommendations and rules for using the local address space. The amendment proposes to allocate a portion of the address space for protocols using an IEEE Registration Authority assigned Company ID (CID). Another portion of the local address space will be allocated for assignment by local administrators.
  + There was discussion about the proposed PAR – its impact and limitations.
  + **IEEE 802.15**: some applications require tracking of individuals, so there was a recommendation that applications should not be prevented from choosing to be tracked. There was a comment that other privacy features could apply (not just identity).
  + Rene pointed out that, in these cases, one is not tracked by a passive observer; there is a trust relationship existing.
  + Piers also commented that, in some cases, it is easy to spoof so it is not a very reliable identifier and therefore not a very reliable way to track.
  + **IEEE 802.11**: will need to define clearly what a session is. Piers commented that it is not the joining but the leaving of a session that should be the concern. The client decides the end of the association (can change MAC).
  + Piers remarked that he read a post about IPv6 privacy addressing and the effects on routers – in particular consumption of resources on the server side; he will send a link to the email list.
  + **IEEE 802.22**: IEEE 802.22 expressed some concerns about the FCC requirement to disclose user’s identity. However, this may be out of scope as it applies to fixed devices.
  + Dan H commented that he cautioned that the group should not get into issues that deal with legal requirements and regulations.
  + **IEEE 802.21**: there were some questions about the network trial, in particular the implications of the use of the AAA infrastructure and how to maintain the MAC address for the session. Additionally, there were questions about how to share the results.
  + **IEEE 802.24**: would this apply in the IoT world, especially for fixed devices? These devices would not be linked to an individual (instead, devices are on a house or building), so may not need to worry about the privacy recommendations in that case. However, other privacy considerations may still be relevant.
* **IAB/IESG (IETF) – IEEE 802 coordination meeting**
  + Discussed the trial set up and reporting details.
  + A threat model will be developed jointly. Alissa Cooper (Cisco) was reported to be involved from the IETF side.
  + The topic of IEEE 802.1 rules for MAC address generation (24 bits instead of 46 bits) resurfaced.
  + Dan Harkins brought up concerns relating to high probability of address collision and thought that it would be horrible to do this. It was pointed out that there may be some standardization issues with the IEEE RAC that may arise if the IEEE 802.1 guidelines are not followed.
  + There was much discussion on comments to be sent back to IEEE 802.1 on the PAR proposal. It was agreed to continue the conversation on the email exploder.
* **IETF MAC address randomization trial status**
  + Juan Carlos reported the dsicussions with the IETF NOC and the current state of the trial plans, including setup, statistics to be collected, etc.
  + Dan Harkins gave a brief overview of his testing results for MAC address randomization using OSX and Android.
  + Dan: Why follow 802.1 recommendation? We can have up to 30,000 sessions at one time.
  + Phil: This is a standards issue, as IEEE RAC is selling OUIs.
  + JCZ: These are the CIDs.
  + Jouni: Local addresses are already used in many devices.
* **Presentation - MAC address randomization in IEEE 802.11 – Mathieu Cunche (INRIA)**
  + <https://mentor.ieee.org/privecsg/dcn/14/privecsg-14-0009-00-0000-mac-address-randomization-in-802-11.pdf>
  + The presentation highlighted that the probability of collision with 24 bits is high.
  + iOS only keeping Local bit on.
  + Location services and cellular data should be off
  + Thoughts Main privacy threats, easy implementations
  + Most Probe request in the wild come from Nintendo\_3DS (derived from SSID)

**Call for proposals/contributions**

* Currently the group is considering the following topics:
  + Privacy Issues at Link Layer
  + Threat Model for Privacy at Link Layer
  + Proposals regarding functionalities in IEEE 802 protocols to improve Privacy
  + Proposals regarding measuring levels of Privacy on Internet protocols
  + Implications of MAC address changes
* Other topics can be brought up and considered by the group.

**Next steps**

* Group will continue call for contributions/proposals and scope of recommended practice
* Upcoming meetings
  + 1 October 2014 (10:00 AM ET), Teleconference
  + 22 October 2014 (10:00 AM ET), Teleconference
  + November 2-7, 2014, IEEE 802 Plenary meeting in San Antonio, TX, USA

**AOB**

* None

**Adjournment**

* Meeting adjourned at 11:15am EDT