**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
| Title | C**omments on 15-14-0355-00** |
| Date Submitted | June 11, 2014 |
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| Re: | [Subclause 7.1 of 802.15 TG10 TGD and [TGD Scenario Parameters #319r0](https://mentor.ieee.org/802.15/dcn/14/15-14-0319-00-0010-tgd-scenario-parameters.docx)] |
| Abstract | [Comments on 15-14-0355-00, Scenario Parameters for CfFP] |
| Purpose | [Define the parameters to consider in the scenario for final proposals] |
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**Introduction**

This document has been prepared to suggest some comments on 15-14-0355-00 and proposals for the open comments regarding the operational scenarios which will be included in the TG10 TGD so that the TG10 scenarios **meet all requirements and fit better to real situations, by which proposals can be fairly compared.**

**Comments on 15-14-0355-00**

**The comments are as shown in green in the following:**

**Comment 1: Upstream and downstream scenario**

We would like to suggest deleting the 3rd scenario (Balanced upstream and downstream) since the upstream traffic is already addressed in the first scenario and the downstream is already addressed in the second scenario.

**No objection**

**Comment 2: Linear topology**

* We should define the position of the PAN coord in the line. We suggest placing the PAN coordinator at the center of the line.
* What is the traffic pattern to be used in a linear topology: Unicast, Multicast, Broadcast? PAN coord to device / device to PAN coord?

We suggest using PAN coord to device, broadcast: for the use case of street lighting of an entire road

**What about using device to device: unicast? Assume that there are multiple lamps in a street. A device can deliver a message which it received from one adjacent device to the other adjacent device as a relay. The PAN coordinator may start this delivery, but in some situations any device can start this delivery. Even a mobile device can do this.**

**Comment 3: Device to device communication**

We should define the placement of the source and the destination in the D2D communication. We suggest using the case depicted below:

From the upper left corner device to the lower right corner device

 

**No objection. This is exactly the same as proposed in 15-14-239-02**

**Open comments to the group**

**Comment 4: Link failure rates**

The group needs to assign values to the link failure rates of each link describe in figures a) and b).

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|  |  |
| a) | b) |

**Comment 5: Multicast**

The group needs to decide on the placement of the devices belonging to the multicast group.

**Proposal: Last three devices of the last row in the figure of Comment 3 above receive the messages from the source device.**

**Comment 6: Multiple devices to device**

The group needs to decide on the placement of the multiple source devices and destination.

**Proposal: First three devices of the first row in the figure of Comment 3 above send the messages to the destination device.**

**Comment 7: Number of PAN coordinators**

When we have 3 PAN coordinators in the P2P scenario does this mean that:

* + 1. We still have 1 grid node placement with 3 PAN coordinators and that each device will associate with the most suitable PAN?



* + 1. We have 3 grids of M nodes each and 1 PAN coordinator in each grid? However, in this case in the largest scenario, we would end up with 30000 nodes to simulate.



(M x 3) nodes

* + 1. We have 3 grids of M/3 nodes and 1 PAN coordinator in each grid?



M nodes

In the case where we have 3 grids, how is the grids’ position? E.g.: In the figures above, the PANs are lined up horizontally.

When there are multiple PANs, which devices should be the source and the destination?

We suggest to avoid multicast, broadcast and multiple devices to device traffic patterns in a multiple PAN scenario and to only focus on the D2D unicast case.

**Proposal: 2x2=4 PAN coordinators located as shown in Slide 14 of 15-14-239-02. For that case, z=2 and the number of PAN coordinators in the parameter table should be four.**

**Comment 8: multiple entry/exit point**

How are we supposed to use the multiple entry/exit point?

**Proposal: three entry points and three exit points located as shown in Slide 18 of 15-14-239-02.**

**Comment 9: mobility**

How many nodes should be mobile if mobility is applied in the P2P scenario? All of them? Only the source or the destination, both? …

**Proposal: Only the source is a mobile device.**

**References**

1. 15- 14-0338-05 TG10 Scenario parameters
2. 15-14-0239-02 **Proposed operational scenarios of L2R networks for TG10 TGD**