IEEE 802.19.1a
Wireless Coexistence

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| Proposed resolution of comment 109 for D0.4  |
| Date: 2016-11-3 |
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Abstract

This contribution provides resolutions to comment CID 109.

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| Comment ID | **Page No.** | **Section** | **Line No.** | **Type (General, Editorial, Technical)** | **Comments** | **Proposed changes** | Resolutions |
| 109 | 100 | 7.2.2.15.2 | 15 | Technical | Unit of l should be provided. | wait for contributions | Add unit of density lambda as “unit/m2” |

Proposed changes

7.2.2.15.2 Capacity calculation of randomly located GCOs over a region

Figure 79 describes the system model where the GCOs are assumed to operate in the TV band. The GCOs in a given residential area are grouped into one management area with radius *R*. Without loss of generality, It is assumed that there is one GCO at the center of the management area. The distance between the center of the management area and the closest point on the TV broadcast contour (also referred to as critical point in ECC Report 186 [1]) is denoted as $α$. The GCO at the center of the management area is denoted as GCO-0 and it’s the n-th nearest neighbor is denoted as GCO-n. *N* is the maximum number of the GCOs. The distance between them is denoted as $d\_{n}$. The angle between $d\_{n}$ and $α$ is $θ\_{n}$, which is uniformly distributed from 0 to 2π. The distance from GCO-*n* to the critical point denoted by $L\_{n}$ as shown in the figure can be calculated as

$L\_{n}=\sqrt{α^{2}+d\_{n}^{2}-2αd\_{n}\cos(θ\_{n})}$,

which is for determining the pathloss in the emission limit calculation . The probability density function of $d\_{n} $can be written as follows

$f\_{d\_{n}}\left(x\right)=e^{-λπx^{2}}\frac{2\left(λπx^{2}\right)^{n}}{xΓ\left(n\right)}$,

where $Γ\left(n\right)$ denotes the Gamma function. The intensity of the distribution $λ$ (unit/m2) can be calculated as $λ={M}/{πr^{2}}$, where *M* is the total number of randomly distributed GCOs normalized to a given management area $πr^{2}$.