**Drafting**

1. Proposed definitions:

**Existing definitions:**

**Sensing measurement:** obtaining sensing measurement data about a target object

**Sensing result:** the information about a target object after processing, such as being present and object dimension, which is related to a particular sensing

**New proposals:**

* **NR Wireless Sensing:** provides sensing measurements and information about target environment(s)’ and object(s)’ characteristics (e.g. shape, size, speed, location, distances or relative motion between objects, etc.) using NR Radio frequencies signals.

**Note:** Some of the sensing capabilities can be influenced by the availability of the spatial diversity of the capabilities of the base station and the UE.

* **5G based wireless sensing service:** aims to enable 5G system to provide NG-RAN based wireless sensing

**5G based wireless sensing service:** aims to enable 5G system to provide NR based wireless sensing

**Sensing Service - based on NR and E-UTRA signalling sensing and UE Wireless Sensing, the calculation or derivation of information about the target object**

**Sensing Service - based on NR sensing, provides information about the target object(s) or target environment.**

**Sensing Service - the aggregation and or post processing of information about the target object(s) or environment. Additional information could be provided via E-UTRA signalling measurements.**

NOTE: Certain use cases (e.g. detection of UE’s significant location change) might alternatively be satisfied using information already available in EPC and E-UTRA. In such cases, the available information can be used. This study will not lead to impacts on EPC and E-UTRA.

1. Proposed KPIs:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Scenario** | **Sensing Distance** | **Sensing Angle/direction**  | **Sensing Speed** | **Interval between two consecutive sensing fixes** | **Latency** |
| **Accuracy** | **Resolution** | **Distance Range**  | **Accuracy** | **Resolution** | **Angle range**  | **Accuracy** | **Resolution** | **Speed range** |
| Road traffic monitoring | FFS | FFS | FFS | FFS | FFS | FFS | FFS | FFS | FFS | FFS(Note 1) | FFS(Note 2) |
| Note 1: Time intervals between successive sensing result reports to a trusted third party application.Note 2: Latency from the gNB to the application server via core network. |

Service availability to be added, influence quantities, service area, coverage, line of sight.

Measuring units should be added to every KPI.

Sensing latency, speed, distance, angle, availability definitions would be needed. Should we use sensing refreshing rate of interval between two consecutive sensing fixes? Or maybe sensing frequency.

Sensing speed is unclear and can be potentially reworded.

Positioning accuracy could be equal to Sensing accuracy.

Proposal for sensing object density as additional KPI. In Addition – probability detection or false alarm.