大唐无线移动创新中心
Datang Wireless Mobile Innovation Center

3GPP TSG RAN #65
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RP-141355

Motivation on Support of WLAN Assisted Positioning in LTE System

CATT

Motivation

- Widely deployed WLAN APs
  - Millions of WLAN APs in operators networks
  - Can be put to more efficient use in positioning enhancement
- To further improve the positioning accuracy
  - High accuracy(about 10m) of A-GNSS is not available in indoor and dense building areas
  - Accuracy of other positioning methods(50~150m) is not as good as A-GNSS
  - WLAN assisted positioning supported in OMA SUPL could achieve accuracy of 2 – 35 meters (statistics from Baidu map)
- Other functions may also benefit
  - e.g. D2D, RRM, MDT, emergency etc., may also benefit from more accurate UE location to improve the performance

Objectives and Impact Analysis

- Objectives
  - To introduce WLAN assisted positioning method in control plane positioning in LTE system
    - RAN2 specifications
    - WLAN AP related measurement requirements in RAN4 specifications
    - Conformance testing in RAN5 specifications (to follow)
- Impact analysis
  - TS36.305: to add some description about WLAN assisted positioning method, procedure etc.
  - TS36.355: to define WLAN related capability, assistance information and location information etc.
  - TS36.133: to add WLAN AP related measurement requirements

Relation to LPPe

- LPPe
  - Built on top of 3GPP defined LPP
  - Full support of 3GPP defined positioning methods in LPPe
    - Including AGNSS, OTDOA, Cell ID, WLAN assisted, etc.
  - Positioning from LPPe relies on OMA support in operator's network
- WLAN assisted positioning in LTE
  - Intend to be a standalone positioning method defined in LPP
  - Reuse the existing positioning architecture
  - No dependence on OMA support for operators

Tentative Work Plan

- Start WI in September or December 2014
- 2 or 3 WG meetings to complete RAN2 work
  - About 0.5 TU for each meeting
- 1 WG meeting to complete RAN1 work
  - < 0.5 TU
- 1 WG meeting to complete RAN4 work
  - < 0.5 TU

Thank you!