Linda Vandeloop
Director-
Federal Regulatory

AT&T Services Inc.
1120 20th Street, NW
Suite 1000
Washington, DC 20036

T: 202.457.3033
F: 202.457.3072

Via Electronic Submission

March 24, 2014

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Portals II, Room TW-A325
Washington, DC 20554

Ex Parte Submission

RE: Petition for Rulemaking Filed by AT&T To Make 800 Cellular Base Station Power Rules Consistent with Rules for Other Mobile Broadband Services, RM 11660;

AT&T Request for Waiver to Permit Power Spectral Density Model for 800 MHz Cellular Operations in Three Florida Markets, WT Docket No. 13-202

Dear Ms. Dortch:

AT&T is providing the attached maps in response to a request from the Mobility Division staff of the Wireless Telecommunication Bureau for examples showing serving area for UMTS (with and without PSD) and LTE (with and without PSD) for a rural site and for an urban site.

Each of the 4 attached maps show the current SAB under the current power limit, the proposed SAB with the new PSD power limit, the current service area, and the proposed service area with the new PSD power limit.

Map 1 (rural) shows UMTS with and without PSD

Map 2 (rural) shows LTE with and without PSD

Map 3 (urban) shows UMTS with and without PSD

Map 4 (urban) shows LTE with and without PSD

As AT&T stated in its petitions, the PSD measurement is a much more realistic method for setting the power limit than the existing per emissions measurement originally developed to set the power limit for analog technology. The maps demonstrate that, for UMTS, the service area is not significantly greater with a PSD measurement. However,

if LTE is deployed without PSD, the current service area is significantly smaller. Even with PSD, the LTE service area falls short of the current UMTS coverage. It is important to note that if the SABs using PSD extend beyond currently filed SABs, power reductions, minor filings or extension agreements may be needed. Alternate SABs from potential power reductions are not reflected in the maps.

In accordance with section 1.1206(b)(2) of the Commission's rules, this letter is being filed electronically with your office. Please feel free to contact me if you have any questions.

Sincerely,

Linda S Vandeloop

Attachment

cc: Roger Noel
Lloyd Coward
Tom Derenge
Moslem Sawez
Nina Shafran
Gabriel Ubieta
Denise Walter

Rethink Possible

Service Area & SAB with new PSD limits on 850 band

03/12/14

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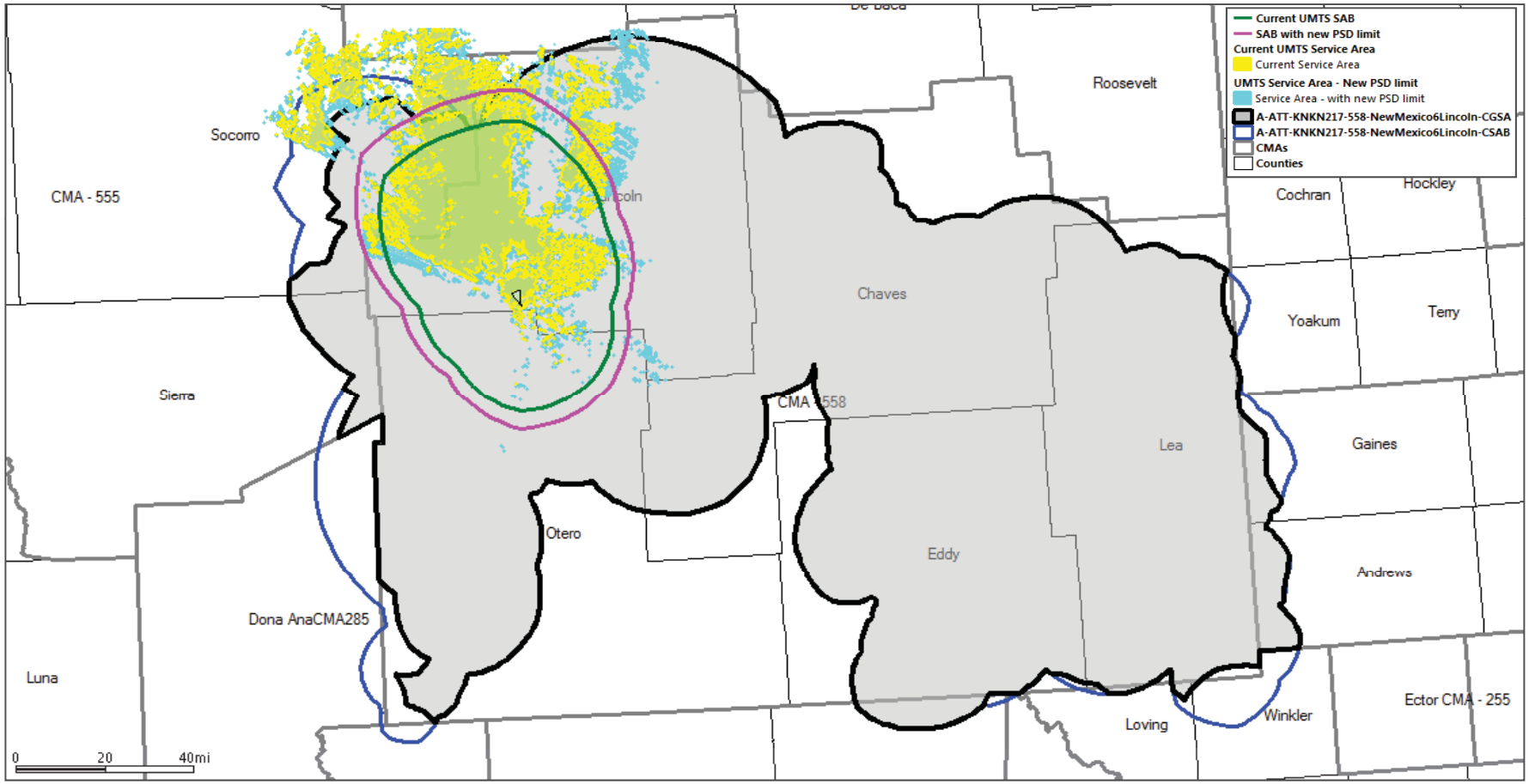
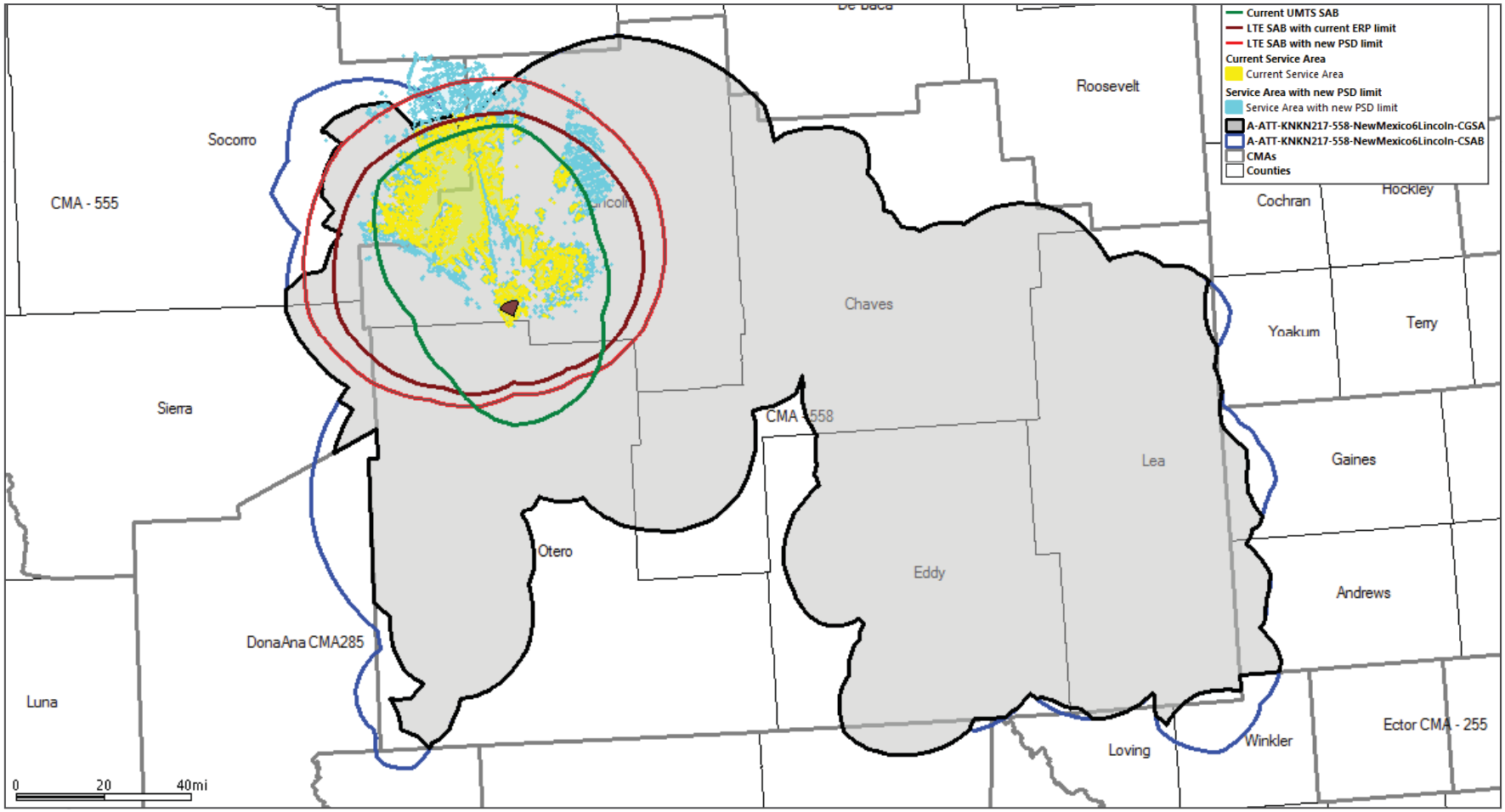
Rural UMTS service area & SAB – with new PSD Limit

- An example illustrating service area and SAB contours for a rural UMTS sector is shown below:
  - 850 band UMTS sector filed with max ERP of 1000W in rural
    - Max SAB distance at 0 degree radial is 69.5km
  - With new PSD limit of 2500W (500W/MHz * 5MHz bandwidth) , scenario illustrated with ERP of 2500W
    - Max SAB distance at 0 degree radial increased to 81.3km



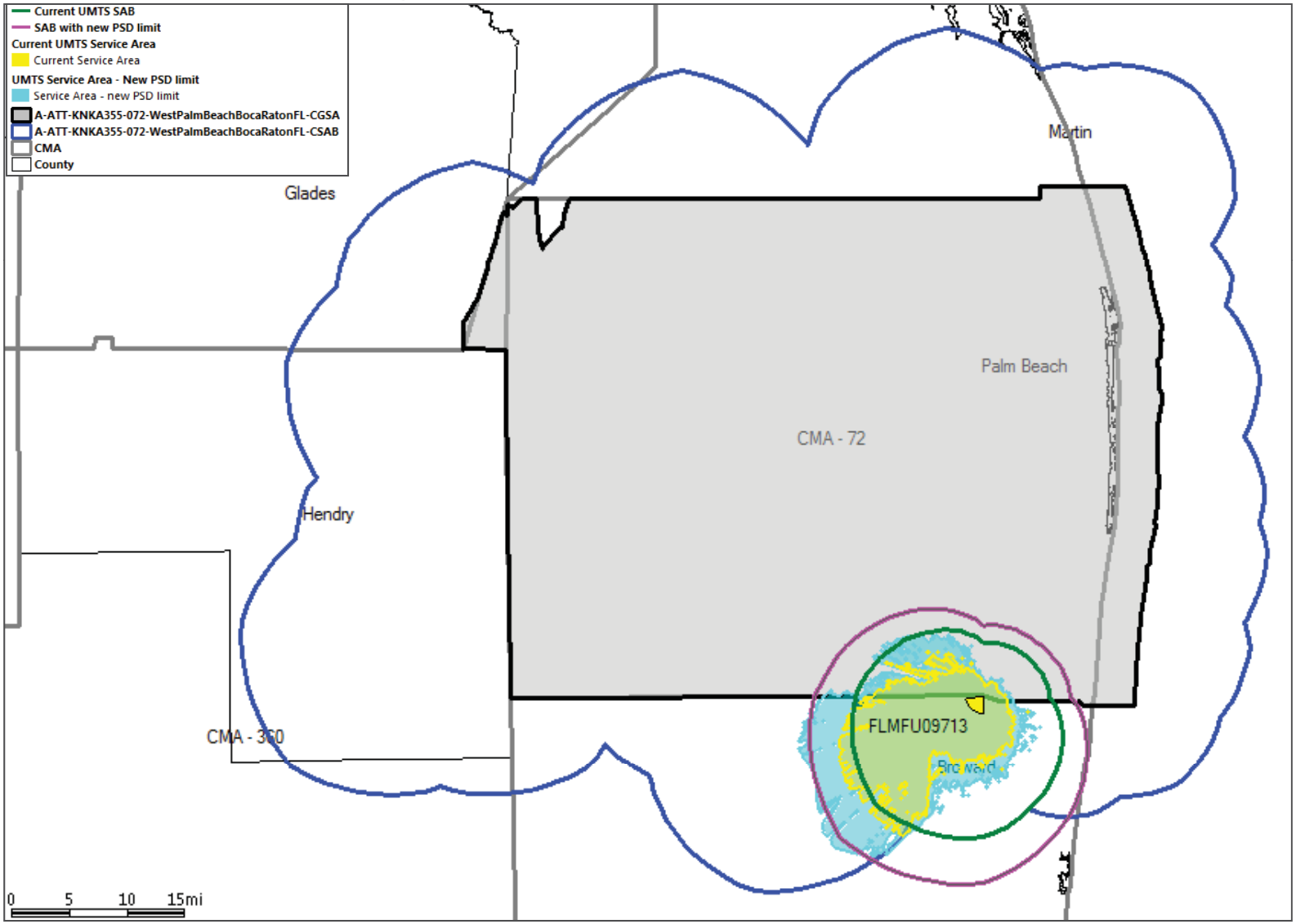
Rural LTE service area & SAB – with new PSD Limit

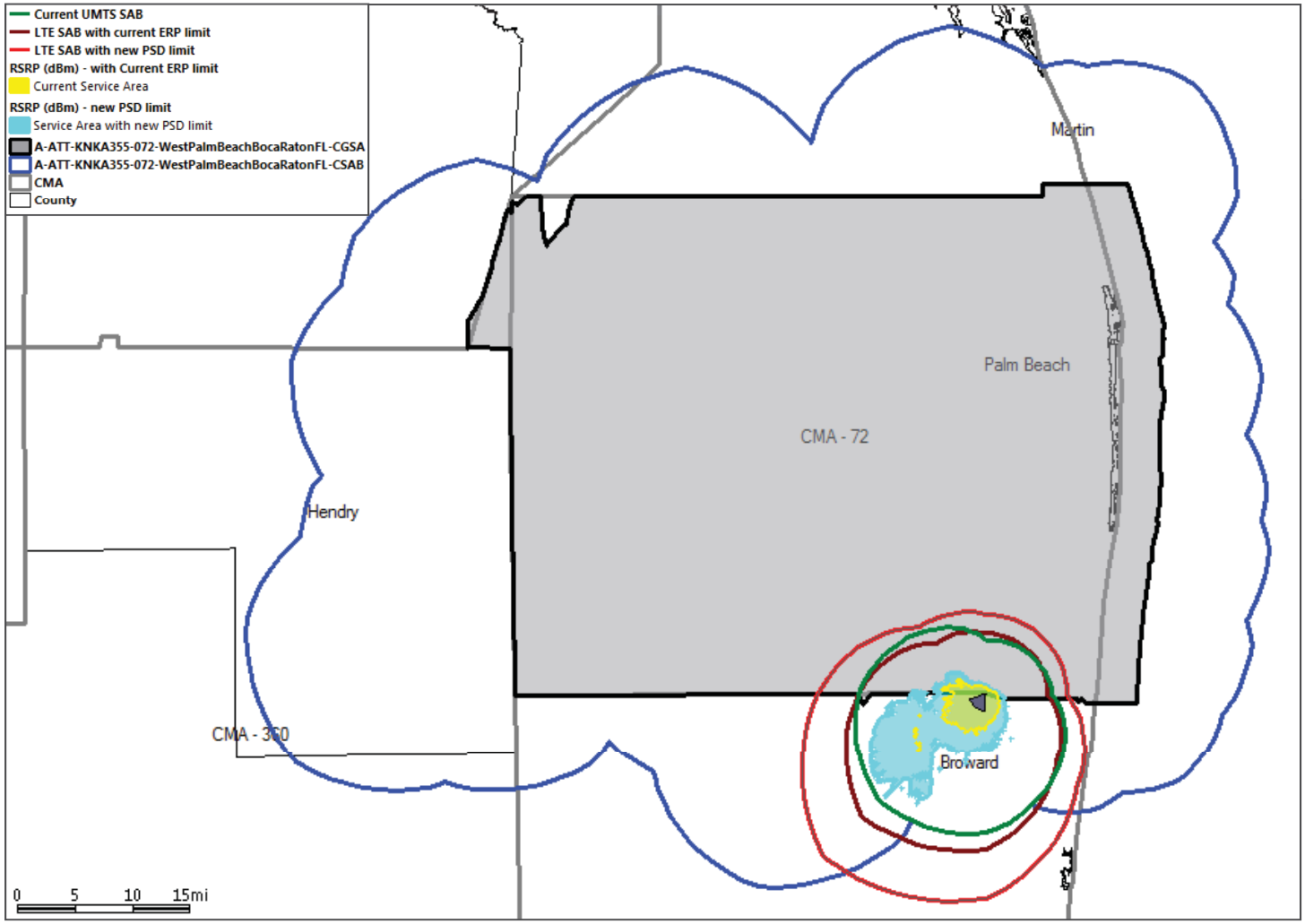
- An example illustrating service area and SAB contours for a rural LTE sector is shown below:
  - 850 band UMTS sector filed with max ERP of 1000W in rural
    - Max SAB distance is at 0 degree radial with value 69.5km. SAB distance at 315 degree radial is 67km.
  - LTE SAB contour with current limit of 1000W has max SAB distance at 315 degree radial at 75km
    - LTE designed with different PA power, antenna type and tilt (electrical & mechanical)
  - With new PSD limit of 2500W (500W/MHz * 5MHz bandwidth), scenario illustrated with ERP of 2500W
    - Max SAB distance at 315 degree radial increased to 87.6km



Urban UMTS service area & SAB – with new PSD Limit

- An example illustrating service area and SAB contours for a urban UMTS sector is shown below:
  - 850 band UMTS sector filed with max ERP of 245W in rural
    - Max SAB distance at 225 degree radial is 21.2km
  - With new PSD limit of 1250W (250W/MHz * 5MHz bandwidth) , scenario illustrated with ERP of 1250W
    - Max SAB distance at 225 degree radial increased to 28km



Urban LTE service area & SAB – with new PSD Limit (1)

- An example illustrating service area and SAB contours for an urban LTE sector is shown below:
  - 850 band UMTS sector filed with ERP of 245W in urban
    - Max SAB distance at 225 degree radial is 21.2km
  - LTE SAB contour with ERP reaching current limit of 500W has max SAB distance at 225 degree radial at 24.5km
    - LTE designed with different PA power, antenna type and tilt (electrical & mechanical)
  - With new PSD limit of 2500W (250W/MHz * 10MHz bandwidth), scenario illustrated with ERP of 2500W
    - Max SAB distance at 225 degree radial increased to 32.1km