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ERSOY et al.(10) **Pub. No.: US 2023/0232362 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **TECHNIQUE FOR DETERMINING A
LOCATION OF A RADIO NETWORK NODE**(71) Applicant: **Telefonaktiebolaget LM Ericsson**
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CPC **H04W 64/00** (2013.01)(57) **ABSTRACT**

A technique for determining an estimated location of a radio network node (FBS) in a cellular network is disclosed. A method implementation of the technique comprises (a) determining, for each of a plurality of measurement reports sent by one or more User Equipments, UEs, (UE1) to one or more neighboring radio network nodes of the radio network node (FBS) in the cellular network, an estimated measurement location from which the respective UE (UE1) sent the respective measurement report, wherein each of the plurality of measurement reports includes signal strength information indicating a received signal strength from the radio network node (FBS) as measured by the respective UE (UE1), (b) for each of a plurality of pairs of the estimated measurement locations: dividing a surrounding area covering the estimated measurement locations of the respective pair into two subregions (Region I, Region II; Region III, Region IV), wherein every location in one of the two subregions (Region I, Region II; Region III, Region IV) is closer to one of the estimated measurement locations of the respective pair and every location in the other one of the two subregions (Region I, Region II; Region III, Region IV) is closer to the other one of the estimated measurement locations of the respective pair, and identifying, from the two subregions (Region I, Region II; Region III, Region IV) and based on the signal strength information included in the measurement reports belonging to the estimated measurement locations of the respective pair, the subregion (Region I, Region II; Region III, Region IV) in which the radio network node (FBS) is more likely located, and (c) determining the estimated location of the radio network node (FBS) as an intersected area of the identified subregions (Region I, Region II; Region III, Region IV).

