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Location-Based Jammer For SUPL Terminal

Abstract: A technique is disclosed that provides a location-based jammer for SUPL (Service User Plane Location) enabled terminals ("SET"), using MAP Supplementary Services. Triggers that activate and deactivate call barring are made when a device enters and leaves a call-restricted area respectively.

This disclosure relates to the field of telecommunications.

Conventional call jamming technology has a number of disadvantages. One device needs to be installed in the intended premises. It bars all network connections with the handset, so there is no voice calling, no SMS, and no data. As a result, in case of emergency, the user cannot make a call or send a text. This is why the governments of most countries decided that it would be better if citizens are not allowed to use cell phone jamming devices – they can be really dangerous in emergency situations.

According to the present disclosure, and as understood with reference to the Figure, users are provided with a mobile application which activates or deactivates the calls based on triggers. The disclosed technique may be advantageously employed in a number of environments having a small community of users, such as employees of a company, students of a university, etc.

Activate and Deactivate call-barring triggers are made automatically without manual intervention. The Activate trigger 30 is generated from the device when the device enters the geographical area 20, defined by a geofence 10, in which calls are to be barred. The Deactivate trigger 40 is generated from the device when the device leaves the intended geographical area in which calls are barred.

The disclosed technique uses the SUPL triggering functions ("STF") provided in the SUPL 2.0 architecture and later. The STF is the function of communicating periodic and event-based triggers between the SUPL location platform ("SLP") and the SET, and evaluating when those trigger conditions have been fulfilled.

The handset is a SUPL enabled terminal (SET). SET-initiated area event triggers provide the location of the SET, as and when the SET moves into a geofence. The trigger criteria will be entering the target geographical area (for example, a library area, an auditorium, etc.).

The "Entering" and "Exiting" trigger types are reported by the SET as soon as it detects that it is transitioning between inside and outside the fenced target area. Whenever the SET sends a report, it waits for the minimum reporting interval before checking if the trigger condition is fulfilled again.

A provisioning tool provides the various geographical targets that are treated as "Entering triggers". The SET user may define different profiles based on the geographical location coordinates.

Each time the SET area event trigger identifies that the SET has "Entered" into a particular geo fence (i.e. a small geographic area that is defined to generate a location event as soon as a user enters or leaves this geofence, and to process this event in the context of Location Based Server), the call activation/deactivation shall be made accordingly.

The disclosed technique advantageously avoids the need for an external jammer device. Only calls are barred; the user can still communication using SMS or data. No manual intervention is needed. And the technique is more accurate than GPS-based solution because it provides more precise position information compared to GPS.

Disclosed by J. H. M. Thippeswamy, Hewlett-Packard Enterprise.

"Entering" Trigger

"Leaving" Trigger

10

30

Area where calls are
retricted
20

40