

**SYSTEM AND METHOD FOR ESTIMATING INDOOR LOCATION USING
SATELLITE SIGNAL GENERATION DEVICE**

Abstract

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The present invention relates to a system and a method for estimating a location for freely providing location estimation service to a user owning a satellite signal receiving terminal, such as an existing mobile phone or a navigator, without having to change any hardware or software, even in shadow areas where satellite signals cannot reach easily, such as inside buildings, underground commercial quarters, tunnels, and subways. The system for estimating an indoor location of using a satellite signal generation device of the present invention comprises: a reception antenna for receiving satellite signals; a central control device for calculating and renewing real-time satellite information of all existing satellites, for extracting and synchronizing satellite time from the satellite signal which is received from the reception antenna, and selecting at least four satellite numbers that can be used for estimating the location from the all existing satellites, based on the satellite time information; and at least one satellite signal generation device for being allocated the satellite number from the central control device and generating the satellite signal which corresponds to the allocated satellite number, wherein an environment is provided for a user of an indoors satellite signal receiving terminal to estimate the location of oneself, based on the satellite signal that corresponds to the at least four satellite numbers, which are transmitted from the satellite signal generation device.

(Figure 2)

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