

**A METHOD FOR SYNCHRONIZING THE REFERENCE FREQUENCY
OSCILLATOR OF A METALLIC-BASED MICROCELL TO A
MASTER OSCILLATOR**

Abstract

5 The present invention involves a device for synchronizing the broadcast
frequency of a base station (31) and a microcell (30) linked together by a metallic
medium (5). The device comprises a base transmitter (4) which transmits a base
time-of-day signal to a microcell comparer (11), and a microcell clock (14) which
sends a microcell time-of-day signal to the microcell comparer (11). A microcell
10 oscillator (12) provides the microcell clock (14) with a reference frequency. The
microcell comparer (11) calculates a time difference which represents a time
difference between the base time-of-day signal and the microcell time-of-day signal.
The microcell comparer then outputs a correction signal to a digital controller (13).
The digital controller adjusts the microcell oscillator (12) according to the correction
15 signal. The present invention also involves a method for using the aforementioned
device to synchronize the base oscillator (1) and the microcell oscillator (12).

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