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Pocket Guide

GSM



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1 “Mobility” – The magic word

Hard to fathom, but it really wasn't all that long ago that even a plain old telephone was a luxury item. But, as we all know, technology's only constant is change. In this day and age, many folks need to be accessible everywhere, whether they're at work or play, in the office or at home. To meet this demand, the GSM standard (Global System for Mobile Communications) for mobile telephony was introduced in the mid-1980s. Today, GSM is the most popular mobile radio standard in the world. A boom is underway, such that many GSM users find life without their phone practically inconceivable.

Nowadays, when we speak of GSM, we usually mean “original” GSM – also known as GSM900 since 900 MHz was the original frequency band. To provide additional capacity and enable higher subscriber densities, two other systems were added later: GSM1800 (also DCS1800) and GSM1900 (also PCS 900). Compared to GSM 900, GSM1800 and GSM1900 differ primarily in the air interface. Besides using another frequency band, they use a microcellular structure (i.e. a smaller coverage region for each radio cell). This makes it possible to reuse frequencies at closer distances, enabling an increase in subscriber density. The disadvantage is the higher attenuation of the air interface due to the higher frequency. The rest of this booklet will mainly focus on GSM900.

Where now? A few years ago, Michael Jackson sang “. . . just call my name and I'll be there”. While this might seem inconceivable now, it might become reality sooner than we think, given the rapid pace of technological evolution. Faced with a whirlwind of speculation, ETSI

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