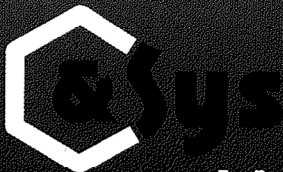


**GSM**

**The GSM  
System for  
Mobile  
Communications**

BROADCOM 1008



**Michel MOULY  
Marie-Bernadette PAUTET**

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# **The GSM System for Mobile Communications**

**A comprehensive overview of the  
European Digital Cellular Systems**

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This book is published by the author's company, Cell & Sys.  
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The name and logo GSM (and "Global System for Mobile  
communications") are registered.

**International Standard Book Number: 2-9507190-0-7**



The interface between the BSS and the mobile station is the already introduced radio interface, whereas the interface between the BSS and the NSS has been named the *A interface* in the *Specifications*. The MS, BSS and NSS form the operational part of the system, whereas the OSS provides means for the operator to control them. This model is shown in figure 2.4.

On this scale, the interactions between the subsystems can be grouped in two main categories. The bottom part of the figure corresponds to a chain:

external networks  $\Leftrightarrow$  NSS  $\Leftrightarrow$  BSS  $\Leftrightarrow$  MS  $\Leftrightarrow$  users

whose business as a whole is to provide transmission paths and means to establish them. This is the operational part of the system, handling the telecommunications traffic. Above it we find the control part, composed of the OSS and the operator, which interacts with the traffic handling part by observing and modifying it so as to maintain or improve its functioning.

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## 2.1. SUB-SYSTEMS

This section will deal with each subsystem in turn. The main purpose is to introduce a number of terms, not to exhaust the subject. The level of detail here is just sufficient to get a general idea of the functional splits. More complete architectural considerations will be found in each of the other chapters of the book, where a more thorough description of the required functions will be found.

### 2.1.1. THE MOBILE STATION (MS)



The mobile station usually represents the only equipment the user ever sees from the whole system. Examples taken from the first types of GSM mobile stations to be on the market are shown in figures 2.5 and 2.6. Mobile station types include not only vehicle-mounted and portable equipment, but also handheld stations, which will probably make up most of the market.

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