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Nota di contenuto	GPRS Networks; Contents; Preface; Introduction; 1 Mobile Radio Evolution; 1.1 Trend from Speech to Data Transmission; 1.2 The Third Generation; 1.3 GSM - The Global System for Mobile Communications; 1.4 GSM - Evolutionary Concept; 1.5 The Standards; 2 The General Packet Radio Service; 2.1 GPRS Objectives and Advantages; 2.2 GPRS Architecture; 2.3 Characteristics of a GPRS Connection; 2.4 Logical Functions; 3 Interfaces and Protocols; 3.1 Introduction; 3.2 Layer Model; 3.3 The Names of the GPRS Interfaces; 3.4 GPRS Procedures; 3.5 GPRS Attach; 3.6 Activation of a PDP Context; 3.7 Data Transfer 3.8 Physical Implementation in the GPRS Network3.9 GPRS Signalling; 3.10 GPRS Protocol Planes; 4 GPRS Procedures; 4.1 GPRS Mobility Management Procedures; 4.2 Session Management Procedures; 4.3 Packet Transfer Procedures; 5 Changes in the Radio Subsystem for GPRS; 5.1 Overview and Key Architecture; 5.2 Introduction of EDGE, ECSD and E-GPRS; 6 Core Network; 6.1 Serving GPRS Support Node (SGSN); 6.2 Gateway GPRS Support Node (GGSN); 6.3 Access Network PCU - SGSN (Gb Interface); 6.4 Core Network SGSN, GGSN (Gn Interface); 6.5 Additional Elements in the Core Network

6.6 Additional Elements at the Gi Interface6.7 Connections Towards the GSM Network; 7 Terminal Equipment; 7.1 Types of Terminal Equipment; 7.2 Multi-slot Classes and GPRS MS Classes; 7.3 The Settings in a GPRS-enabled Mobile Device; 8 Planning and Dimensioning; 8.1 Introduction; 8.2 Network Dimensioning; 8.3 GPRS Radio Subsystem; 8.4 GPRS Core Network; 8.5 User Aspects; 8.6 Indoor Radio Networks; 9 Towards All-IP Networks; 9.1 The TCP/IP Protocol Suite; 9.2 Convergence of Fixed, Mobile and Data Networks; 9.3 The Roles of GSM, GPRS and UMTS in Converged Networks; 10 Applications; 10.1 Services  
10.2 Multimedia Messaging Service (MMS)10.3 GSM-R; 10.4 m-Business and m-Commerce; 11 Roaming and GRX; 11.1 Introduction; 11.2 Why do we need Roaming in GPRS?; 11.3 Architecture; 11.4 GPRS Roaming eXchange (GRX) Network; 11.5 Procedures; 11.6 Quality Aspects of GRX; Glossary and Abbreviations; Index

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### Sommario/riassunto

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GPRS is a packet based wireless communication service that offers data rates from 9.05 up to 171.2 Kbps and continuous connection to the Internet for mobile phone and computer users. GPRS is based on GSM communications and complements existing services such as circuit switched cellular phone connections and the Short Message Service (SMS). GPRS represents the bridge between 2G and 3G mobile telecommunications and is commonly referred to as 2.5G. Implementation of GPRS requires modification of the existing GSM networks in that GSM is a circuit switched technology while GPRS is packet oriented.

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