1. Record Nr. UNINA9910139492203321 Autore Henry-Labordere A. Titolo Virtual roaming systems for GSM, GPRS, and UMTS: open connectivity in practice / / Arnaud Henry-Labordere Pubbl/distr/stampa Chichester, West Sussex, U.K.; ,: John Wiley, , 2009 [Piscatagay, New Jersey]:,: IEEE Xplore,, [2009] **ISBN** 1-282-31684-2 9786612316845 0-470-68428-3 0-470-68429-1 Descrizione fisica 1 online resource (342 p.) Disciplina 621.3821 Soggetti Roaming (Telecommunication) Wireless communication systems Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Nota di contenuto -- Preface xiii -- By the Same Author xviii -- Abbreviations and Acronyms xix -- 1 'Virtual Roaming' Purpose and Principles 1 -- 1.1 Mobile Services Affected by Virtual Roaming 1 -- 1.2 Virtual Roaming Hub for Inbound Visitors' Service (Single IMSI) 2 -- 1.3 Virtual Roaming Hub for Outbound Subscribers: Multi-IMSI 7 -- 1.4 Brief Introduction to Standard Bilateral Roaming Procedures 9 -- 1.5 Principles of the SS7 Protocol Layers Used in Roaming Procedures 10 -- 2 Architecture of Virtual Roaming Systems 15 -- 2.1 SCCP, MAP, CAP and GTP Transformation Principle in the Roaming Hub 15 -- 2.2 Procedures for the Virtual Roaming Visitors' Service (Single IMSI) 16 -- 2.3 Restriction of Virtual Roaming by the Roaming Hub 29 -- 2.4 Procedures for the Virtual Roaming Visitors' Service (Multi-IMSI) 31 -- 2.5 IS 41 ↔ ƒnMAP GSM Inter-standard Roaming Hubs 37 -- 2.6 Various MAP and CAMEL Transformation Methods 39 -- 2.7 Appendix of Chapter 2 41 -- References and Further Reading 48 -- 3 Connecting the VPLMN MNOs to a Virtual Roaming Supplier 51 -- 3.1 MNO Configuration vs

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## Sommario/riassunto

This book provides a detailed technical guide to the virtual and optimised roaming systems for mobile networks Written by a pioneer in the field, this book focuses on the implementation of virtual roaming systems. It generalizes the previous SS7 SMS interworking architectures to voice and data, GPRS, and 3G virtual roaming; extending the discussion of virtual roaming to include location based services, optimal routing and 4G perspectives. The author provides a thorough and detailed technical explanation of the topic covering subjects such as 'Over the Air' (OTA) provisioning and detailed geo-localisation systems in a virtual roaming environment. Finally, this book addresses the application of MAP, CAMEL, TCAP, SCCP, and GTP. Key Features: \*Provides a thorough and detailed technical coverage of virtual and optimised roaming systems for mobile networks \*Explores the application of MAP, CAMEL, TCAP, SCCP, and GTP \*Discusses previous SMS Hubs architecture used for SMS interworking and generalises to voice, data, and 3G virtual roaming \*Includes material on pre-paid case with CAMEL parameter transformations, SMS, Supplementary Services and USSD implementation \*Focuses on roaming hubs (including an, introduction to Sigtran configuration) and transparent networks of hubs This book will serve as an invaluable reference for network and networking engineers, handset developers, systems implementers, systems integrators, systems software engineers and programmers. wireless specialists and anybody else seeking a comprehensive and practical guide to the basics of virtual roaming systems.