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2.3.3 Dimensioning in the WCDMA Radio Network2.4 Radio Wave Propagation; 2.4.1 Okumura-Hata Model; 2.4.2 Walfish-Ikegami Model; 2.4.3 Ray Tracing Model; 2.4.4 Model Tuning; 2.5 Coverage Planning; 2.5.1 Coverage Planning in GSM Networks; 2.5.2 Coverage Planning in EGPRS; 2.5.3 Coverage Planning in WCDMA Networks; 2.6 Capacity Planning; 2.6.1 Capacity Planning in GSM Networks; 2.6.2 EGPRS Capacity Planning; 2.6.3 Capacity Planning in WCDMA Networks; 2.7 Frequency Planning; 2.7.1 Power Control; 2.7.2 Discontinuous Transmission; 2.7.3 Frequency Hopping; 2.7.4 Interference Analysis 2.8 Parameter Planning2.8.1 Parameter Planning in the GSM Network; 2.8.2 Parameter Planning in the EGPRS Network; 2.8.3 Parameter Planning in the WCDMA Network; 2.9 Radio Network Optimisation; 2.9.1 GSM Radio Network Optimisation Process; 2.9.2 Optimisation in the EGPRS Network; 2.9.3 Optimisation in the WCDMA Network; 3 Transmission Network Planning and Optimisation; 3.1 Access Transmission Network Planning Process; 3.1.1 Master Planning; 3.1.2 Detail Planning; 3.2 Fundamentals of Transmission; 3.2.1 Modulations; 3.2.2 Multiple Access Schemes; 3.3 Digital Hierarchies - PDH and SDH 3.3.1 Plesiochronous Digital Hierarchy (PDH)3.3.2 Synchronous Digital Hierarchy (SDH); 3.3.3 Asynchronous Transfer Mode (ATM); 3.4 Microwave Link Planning; 3.4.1 Microwave Link; 3.4.2 Microwave Tower; 3.4.3 Microwave Link Design; 3.4.4 LOS Check; 3.4.5 Link Budget Calculation; 3.4.6 Repeaters; 3.5 Microwave Propagation; 3.5.1 Slow Fading; 3.5.2 Fast Fading; 3.5.3 Overcoming Fading; 3.6 Interface Planning; 3.6.1 Abis Planning; 3.6.2 Dynamic Abis; 3.6.3 Interface Planning in the UMTS Access Transmission Network; 3.7 Topology Planning; 3.8 Frequency Planning and Interference
3.8.1 Loop Protection

Sommario/riassunto

A highly practical guide rooted in theory to include the necessary background for taking the reader through the planning, implementation and management stages for each type of cellular network. Present day cellular networks are a mixture of the technologies like GSM, EGPRS and WCDMA. They even contain features of the technologies that will lead us to the fourth generation networks. Designing and optimising these complex networks requires much deeper understanding. Advanced Cellular Network Planning and Optimisation presents radio, transmission and core network planning and optimisatio

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Microgear Fabrication and Sintering with Microwaves
Synthesis of ZnO Nanopowders by Controlled Double-Jet PrecipitationSynthesis of Nanostructured Mullite and Mullite-Zirconia Ceramic Composite Powders by Using a Modified and Cost Effective Sol-Gel Method; Nanostructured Materials Based on Alumina; Characterization of Epitaxial Barium Titanate Films Deposited under Hydrothermal Conditions; Details of Urea Decomposition in the Presence of Transition Metal Ions; Gel Casting of Ceramic Foams; Processing of Biomorphous Tic-Based Ceramics; Synthesis of Non-Permeable Porous Ceramics by Mixing Ceramic Hollow Micro Spheres Ceramic Spheres Derived from Cation Exchange BeadsTensile Evaluation of Ceramic Foam Ligaments; Utilization of Diatomite as a Desiccant Aid; Assessment of Damage Tolerance for Porous Ceramics; Fracture Behavior of Sic-Based, Clay-Bonded Hot Gas Filters; 30 Image Construction of Porous Ceramics by X-Ray CT and Stress Distribution Analyses using Voxel Mesh Method; 3 Dimensional CT Analyses of Bone Formation in Porous Ceramic Biomaterials; Influence of Grinding Fluids on the Abrasive Machining of a Micaceous Glass Ceramic
Wear Characterization of Clinically used Hip Joint Prostheses by a HIP SimulatorFabrication of Biocompatible Calcium Phosphate Ceramics Using Eggshell; Calcium Aluminate/Calcium Phosphate Composite Orthopedic Bone Cement; Fabrication of Composite for Bone Repairing from Alpha-tricalcium Phosphate and Hydroxypropylcellulose; Preparation of Bioactive Inorganic-Organic Hybrids by Hot Water Treatment; Bioactive Titania Gel-Derived from Combined Chemical and Thermal Treatments of Titanium
Apatite Formation on the PMMA Bone Cement Modified with Alkoxysilane and Calcium Salt in a Simulated Body Fluid

Sommario/riassunto

This volume is part of the Ceramic Engineering and Science Proceeding (CESP) series. This series contains a collection of papers dealing with issues in both traditional ceramics (i.e., glass, whitewares, refractories, and porcelain enamel) and advanced ceramics. Topics covered in the area of advanced ceramic include bioceramics, nanomaterials, composites, solid oxide fuel cells, mechanical properties and structural design, advanced ceramic coatings, ceramic armor, porous ceramics, and more.