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Sommario/riassunto

The First to Present 3D Technology as Applied to Commercial Programming for the ConsumerThis is the first book to provide an overview of the technologies, standards, and infrastructure required to support the rollout of commercial real-time 3 Dimension Television/3 Dimension Video (3DTV/3DV) services. It reviews the required standards and technologies that have emerged-or are just emerging-in support of such new services, with a focus on encoding mechanisms formats and the buildout of the transport infrastructure.While there is a lot of academic interest in various intrinsic aspects of 3DTV, service providers and consumers ultimately tend to take a system-level view. 3DTV stakeholders need to consider the overall architectural system-level view of what it will take to deploy an infrastructure that is able to reliably and cost-effectively deliver a commercial-grade quality bundle of multiple 3DTV content channels to paying customers with high expectations. This text, therefore, takes such a system-level view, revealing how to actually deploy the technology.Presented in a self-contained, tutorial fashion, the book begins with a review of 3DTV in the marketplace and the opportunities and challenges therein. Recent industry events related to 3D are also discussed. From there, the fundamental visual concepts supporting stereographic perception of 3DTV/3DV are explained, as are encoding approaches. Readers will understand frame mastering and compression for conventional stereo video (CSV) and more advanced methods such as video plus depth (V+D), multi-view video plus depth (MV+D), and layered depth video (LDV).Next, the elements of an end-to-end 3DTV system are covered from a satellite delivery perspective, with explanations of digital video broadcasting (DVB) and DVB-handheld. Transmission technologies are assessed for terrestrial and IPTV-based architecture; IPv6 is reviewed in detail. Finally, the book presents 3DTV/3DV standardization and related activities, which are critical to any type of broad deployment. System planners, the broadcast TV industry, satellite operators, Internet service providers, terrestrial telecommunication carriers, content developers, design engineers, venture capitalists, and students and professors are among those stakeholders in these services, and who will rely on this volume to discover the latest 3D advances, market opportunities, and competing technologies.