Mário Marques da Silva, Américo Correia, Rui Dinis, Nuno Souto, João Carlos Silva, "Transmission Techniques for Emergent Multicast and Broadcast Systems", CRC Press Auerbach Publications, ISBN: 9781439815939, FL, USA, May 2010 (<http://www.crcpress.com/product/isbn/9781439815939>);

Abstract: Multimedia Broadcast and Multicast Service (MBMS) as video broadcast or mobile television is intended to use spectrum-efficient multimedia services, by transmitting data over a common radio channel, where the bottleneck is placed to a large group of users.

This book proposes and studies several advances in transmission techniques and receivers to support emergent wireless needs for MBMS requirements. These new services require extensive exploitation of advanced schemes as Multiple Input Multiple Output (MIMO), hierarchical constellations, multi-resolution transmission, macro-diversity principles and Multihop relay techniques. All of these principles are studied and advances are proposed for different environments, using both Wideband – Code Division Multiple Access (WCDMA) and Orthogonal Frequency Division Multiple Access (OFDMA). It is shown that OFDMA access technique associated to the identified techniques and receiver advancements make the wireless medium able to satisfy the current and emergent MBMS requirements.