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Sommario/riassunto

Resource allocation and power optimization is a new challenge in multimedia services in cellular communication systems. To provide a better end-user experience, the fourth generation (4G) standard Long Term Evolution/Long Term Evolution-Advanced (LTE/LTE-Advanced) has been developed for high-bandwidth mobile access to accommodate today's data-heavy applications. LTE/LTE-Advanced has adopted discontinuous reception (DRX) to extend the user equipment's battery lifetime, thereby further supporting various services and large amounts of data transmissions. By introducing the basics of mathematical