1. Record Nr. UNINA9910824900003321 Autore Fowler Scott A Titolo LTE-advanced DRX mechanism for power saving // Scott A. Fowler, Abdelhamid Mellouk, Naomi Yamada Hoboken, NJ:,: ISTE Ltd/John Wiley and Sons Inc,, 2013 Pubbl/distr/stampa **ISBN** 1-118-76184-7 1-118-76201-0 1-118-76195-2 Descrizione fisica 1 online resource (120 p.) Collana Focus networks and telecommunications series, , 2051-2481 Altri autori (Persone) MelloukAbdelhamid YamadaNaomi Disciplina 520 Long-Term Evolution (Telecommunications) Soggetti Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. ""Cover ""; ""Title Page ""; ""Contents ""; ""Preface ""; ""Introduction ""; ""Chapter 1. Basic Theory""; ""1.1. LTE overview""; ""1.2. Scheduling in Nota di contenuto LTE""; ""1.2.1. Quality of Service parameters""; ""1.2.2. Channel quality indicator""; ""1.2.3. Buffer state and resource allocation history""; ""1.3. LTE Traffic measurements" ""1.3.1. Testing environment""1.3.2. VoIP preliminary capacity""; ""1.3.3. Video conversation preliminary capacity""; ""1.3.4. Post video and live video preliminary capacity""; ""1.3.5. Summary on the LTE Traffic measurements"; ""1.4. User equipment power saving in LTE"" ""1.4.1. DRX cycle"""1.5. Models for LTE Power Saving"; ""1.5.1. 3GPP power consumption model""; ""1.5.2. Characteristics of NokiaTM power consumption model""; ""1.6. Conclusion"; ""1.7. Bibliography""; ""Chapter 2. Analytical Semi-Markov Power-Saving Models"" ""2.1. Introduction of bursty packet data traffic""""2.2. Designing a simple Two-state DRX model using semi-Markov""; ""2.2.1. State 1 to state 1 and state 1 to state 2 ""2.2.2. Transition probability matrix""; ""2.2.3. How we obtain equation [2.4]"; ""2.2.4. Holding states"" ""2.2.5. State H1""""2.2.6. Sleep states H2""; ""2.2.7. DRX cycles in basic 3GPP LTE""; ""2.2.8. Wake-up delay ""; ""2.2.9. Power-saving factor (PS) ""2.2.10. Numerical results""; ""2.3. Three-state fixed model""; ""2.3.1.

State 1 to state 1 and state 1 to state 2""

## ""2.3.2. State 2 to state 1 and state 2 to state 3""

## 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