

4th International Conference and Business Expo on

Wireless, Telecommunication & IoT

July 19-20, 2018 | London, UK

QoE-based service analytics and optimization model with big data

Pierre Espoir Koffi^{1, 2}¹HADWIGER, France²IMT Atlantique, Rennes, France

Customer experience has become the central interest of new generation of telecom service, and lots of business use cases into the industry are expecting customer-centric analytics, operational insight and effective decision making. Network performance management is basically still the main activity for operators to assess service they deliver. Providing such services rely on proprietary network equipment parameters design, both radio and transport level such as voice quality inter-frequency handover, LTE QCI Relative Priority, and specific network level quality of service (QoS) parameters like voice drop call or throughput that measure service performance. Network optimization engineering comes additionally to maintain best parameters value and deliver better service. Mostly, these parameters are strategy parameters controlling the service initiation and management. This approach is proved to be inadequate to meet service quality experience as perceived by users. More and more customers complaints root cause are not correctly understood or time consumer to be identified. The quality experience transformation requires a distinct set of capabilities to move from network QoS level to quality of experience (QoE)-centric performance management. We present a service experience quality management concept that models QoE metrics with semantic and validated mathematical interdependency to QoS for real-time QoE analytics, and a service quality optimization engine for prescriptive procedures to automatically adjust service delivery parameters. We use big data and cognitive technologies onto various telco's data, from call traces to network strategy data. Communication service is modelled also as a set of interactions of usage and management functions to be implemented through expectation, context and experience challenges to satisfy a set of QoS parameters.

pekoffi@hadwiger-group.com