

ASP Regional Preparatory Meeting (RPM) for WTDC-14 Phnom Penh, Cambodia, 29 April - 1 May 2013

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TITLE: Quality of Experience (QoE) Model

Priority area : Proposals on how ITU-D future work can best respond to the identified strategic/priority areas

Description

1. Quality of Experience (QoE) Model

- 1.1 Quality of Experience (QoE) refers to the overall acceptability of a service, as perceived subjectively by the end-user. QoE thereby includes the complete end-to-end system effects (client, terminal, network, services infrastructure, etc.) where overall acceptability may be influenced by user expectations and context. The service may work perfectly from a pure network perspective while the customer is facing a bad service Quality of Experience (QoE). A good QoS does not mean the Operator is delivering a great customer experience (QoE).
- 1.2 Quality of experience is affected by technical and non-technical aspects of service:
- 1.3 It is seen that telecom consumers are confused while selecting a telecom service and a telecom service provider. Especially with the convergence of technologies and the trend towards all IP network, end to end QoS becomes a prime consideration for the customer. There are various parameters, benchmarks defined by various countries catering to the regional requirements but the customer does not get a simple indicative tool to compare the various services and the providers. Though various studies and research are going on in various institutions, a common modeling concept is still not arrived at. Hence, the regional countries could share their experiences and the expectations of their customer to arrive at indicative QoE modeling indexes.

Various Indexes for Measuring Quality of Experience

- 1.4 There are various indexes for the measurement of the Quality of the Service perceived by the consumers. Some of them are:
 - Network Service Quality Index(NSQI)
 - Customer Service Quality Index(CSQI)
 - Customer Satisfaction Service Quality Index(CSSQI)
- 1.5 The network QoS is calculated by adding all the score obtained by the parameters/ benchmarks marked for monitoring by various regulatory bodies. These indexes could be calculated with the help of the performance monitoring report(PMR) submitted by the service provider. Based on which the score card for the different index are calculated.

- 1.6 The various customer service quality parameters could be derived by the CRM system of the service providers and could be used for calculation of the Customer Service Quality Index. The customer satisfaction survey index could be calculated by various survey and audit of the service providers network through independent agencies.
- 1.7 Based on the above indexes, a modelling concept could be evolved to define the Quality of experience of a customer in a country, region and the world.
- 1.8 The model intends to combine the user behavior and the actual performance of the network. It will take into consideration various Variables, some of which are-Customer Expectation, Value perception, Technical quality perception, Customer Satisfaction, Service quality perception, Customer Loyalty and Technical Specifications .
- 1.9 For example, the customer expectation may vary from the Average transmission speed of user network network/the average transfer rate provided by the Telecom operator, the number of telecommunication services used by the customer/the number of telecommunication services offered by the Telecom operator to the number of the home population who used the telecommunication services/ home total population. Similarly each component and variable could be defined.

Objective(s)

- i. Establish a region specific QoE modeling concept to define the QoE of the telecom consumers with the region facilitating others to choose a particular service and service provider.
- ii. To establish consistent and minimum/basic quality of experience for end users and corresponding objective and subjective targets to ensure critical success of telecom service offerings.
- iii. Study of the parameters that define the "user-centric seamless mobility", resulting in achieving QoE based best available services.

Expected results

- i. Service Providers may wish to set their own preferred and/or premium QoE driven targets to provide differentiated services in their markets.
 - ii. Development of a QoE framework that supports generic QoE definition and QoE based content adaptation. As a consequence of this applications/ services for user-centric QoE will be developed.
 - iii. Create global standards for measurement of Quality of Experience in a telecom network for a particular service.
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