

**User Group;
Quality of ICT Services;
Definitions and Methods for Assessing the QoS parameters
of the Customer Relationship Stages other than utilization**

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[ETSI EG 202 843 V1.1.1 \(2011-01\)](https://standards.iteh.ai/catalog/standards/etsi/6ac1b152-d943-4f15-a98f-1ff7c4d24561/etsi-eg-202-843-v1-1-1-2011-01)

<https://standards.iteh.ai/catalog/standards/etsi/6ac1b152-d943-4f15-a98f-1ff7c4d24561/etsi-eg-202-843-v1-1-1-2011-01>



Reference

DEG/USER-00024

Keywords

QoS, user

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

(<https://standards.iteh.ai>)
Document Preview

Important notice

Individual copies of the present document can be downloaded from:

<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at

<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, please send your comment to one of the following services:

http://portal.etsi.org/chaicor/ETSI_support.asp

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2010.
All rights reserved.

DECT™, **PLUGTESTS™**, **UMTS™**, **TIPHON™**, the TIPHON logo and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.

3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

LTE™ is a Trade Mark of ETSI currently being registered

for the benefit of its Members and of the 3GPP Organizational Partners.

GSM® and the GSM logo are Trade Marks registered and owned by the GSM Association.

Contents

Intellectual Property Rights	21
Foreword.....	21
Introduction	21
1 Scope	23
2 References	23
2.1 Normative references	23
2.2 Informative references.....	23
3 Definitions, symbols and abbreviations	24
3.1 Definitions.....	24
3.2 Symbols.....	27
3.3 Abbreviations	30
4 Common Basis for QoS parameter assessment.....	30
4.1 Opinion Rating	31
4.1.1 Definition of OR.....	31
4.1.2 Example	31
4.2 Selection of an appropriate data source	32
4.2.1 Expert panel.....	32
4.2.2 Customer survey	33
4.2.3 Service provider data	34
4.3 Samples sizes and examples	34
4.3.1 Statistical considerations.....	35
4.3.1.1 Low sample sizes	35
4.3.1.2 Medium sample sizes	36
4.3.1.3 Large sample sizes	36
4.3.2 Mean value versus Median	38
4.3.3 Confidence level	39
4.3.4 Accuracy of indicators	39
4.3.5 Observation period.....	39
4.3.6 Selection of Panels.....	39
4.3.7 Determination of boundary conditions prior to assessment of parameters	40
4.4 Guidance on the presentation of the results.....	40
4.4.1 Histogram	40
4.4.2 Distribution Functions	40
4.4.3 Mean value.....	40
4.4.4 Quantile	41
4.4.5 Chart	41
4.4.6 Choice of the best suited presentations	41
5 Parameter Definitions.....	41
5.1 Customer Relationship Stage: Preliminary information (PI).....	41
5.1.1 P101: Integrity of PI [OR]	42
5.1.1.1 Definition of Parameter.....	42
5.1.1.1.1 Explanation on Parameter Definition	42
5.1.1.2 Equation	43
5.1.1.3 Measure	43
5.1.2 P102: Pricing transparency [OR]	43
5.1.2.1 Definition of Parameter.....	43
5.1.2.1.1 Explanation on Parameter Definition	43
5.1.2.2 Equation	43
5.1.2.3 Measure	43
5.1.3 P103: Availability of PI [%]	44
5.1.3.1 Definition of Parameter.....	44
5.1.3.1.1 Explanation on Parameter Definition	44
5.1.3.2 Equation	44

5.1.3.3	Measure	44
5.1.4	P104: Response time for the provision of PI [Time]	45
5.1.4.1	Definition of Parameter	45
5.1.4.1.1	Explanation on Parameter Definition	45
5.1.4.2	Equation	45
5.1.4.3	Measure	45
5.1.5	P105: Response time of the commercial desk [Time & %]	45
5.1.6	P106: Overall rating of the responsiveness of the service desk [OR]	45
5.1.7	P107: User friendliness of the Internet user interface [OR]	46
5.1.8	P108: User friendliness of the service desk operators [OR]	46
5.2	Customer Relationship Stage: Contract Establishment	46
5.2.1	P201: Integrity of contract information [OR]	47
5.2.1.1	Definition of Parameter	47
5.2.1.1.1	Explanation on Parameter Definition	47
5.2.1.2	Equation	47
5.2.1.3	Measure	48
5.2.2	P202: Compliance of contractual terms with PI [%]	48
5.2.2.1	Definition of Parameter	48
5.2.2.1.1	Explanation on Parameter Definition	48
5.2.2.2	Equation	48
5.2.2.3	Measure	48
5.2.3	P203: Flexibility for customisation before contract [OR]	48
5.2.3.1	Definition of Parameter	48
5.2.3.1.1	Explanation on Parameter Definition	49
5.2.3.2	Equation	49
5.2.3.3	Measure	49
5.2.4	P204: Ease and flexibility to amend terms after formal contract [OR]	49
5.2.4.1	Definition of Parameter	49
5.2.4.1.1	Explanation on Parameter Definition	49
5.2.4.2	Equation	49
5.2.4.3	Measure	49
5.2.5	P205: Response time of the commercial desk [Time & %]	49
5.2.6	P206: Delay to settle a contract [Time & %]	50
5.2.7	P207: Delay for a contract acknowledgment [Time & %]	50
5.2.8	P208: Overall rating of the responsiveness of the sales desk [OR]	50
5.2.9	P209: Ease of the subscription process [OR]	50
5.2.10	P210: Vendors empathy and responsiveness [OR]	50
5.3	Customer Relationship Stage: Service provisioning	50
5.3.1	P301: Meeting promised provisioning date [%]	53
5.3.1.1	Definition of Parameter	53
5.3.1.1.1	Explanation on Parameter Definition	53
5.3.1.2	Equation	53
5.3.1.3	Measure	53
5.3.2	P302: Time for provisioning [Time]	54
5.3.2.1	Definition of Parameter	54
5.3.2.1.1	Explanation on Parameter Definition	54
5.3.2.2	Equation	54
5.3.2.3	Measure	54
5.3.3	P303: Successful provisioning within specified period [%]	54
5.3.3.1	Definition of Parameter	54
5.3.3.1.1	Explanation on Parameter Definition	54
5.3.3.2	Equation	54
5.3.3.3	Measure	55
5.3.4	P304: Contract cancelled due to non fulfilment [%]	55
5.3.4.1	Definition of Parameter	55
5.3.4.1.1	Explanation on Parameter Definition	55
5.3.4.2	Equation	55
5.3.4.3	Measure	56
5.3.5	P305: Completeness of fulfilment of contractual specification in the provision of a service [%]	56
5.3.5.1	Definition of Parameter	56
5.3.5.1.1	Explanation on Parameter Definition	56
5.3.5.2	Equation	56

5.3.5.3	Measure	56
5.3.6	P306: Punctuality of service provisioning [Time]	56
5.3.6.1	Definition of Parameter	56
5.3.6.1.1	Explanation on Parameter Definition	56
5.3.6.2	Equation	57
5.3.6.3	Measure	57
5.3.7	P307: Punctuality of equipment delivery for service provisioning [Time]	57
5.3.7.1	Definition of Parameter	57
5.3.7.1.1	Explanation on Parameter Definition	57
5.3.7.2	Equation	57
5.3.7.3	Measure	58
5.3.8	P308: Provisioning not complete and correct first time [%]	58
5.3.8.1	Definition of Parameter	58
5.3.8.1.1	Explanation on Parameter Definition	58
5.3.8.2	Equation	58
5.3.8.3	Measure	58
5.3.9	P309: Provisioning time [Time & %]	59
5.3.10	P310: Overall quality of the provisioning process including the reception desk [OR]	59
5.3.11	P311: Provider ability to match the customer's wishes for conditions of achievement [OR]	59
5.3.12	P312: User friendliness of the means available to the customer for the operations he has to perform [OR]	59
5.3.13	P313: Portage delay (when applicable) [Time & %]	59
5.3.14	P314: Proportion of problems with number portability procedures [%]	59
5.4	Customer Relationship Stage: Service alteration	60
5.4.1	P401: Time for alteration [Time]	61
5.4.1.1	Definition of Parameter	61
5.4.1.1.1	Explanation on Parameter Definition	61
5.4.1.2	Equation	62
5.4.1.3	Measure	62
5.4.2	P402: Successful service alteration within specified period [%]	62
5.4.2.1	Definition of Parameter	62
5.4.2.1.1	Explanation on Parameter Definition	62
5.4.2.2	Equation	62
5.4.2.3	Measure	63
5.4.3	P403: Completeness of fulfilment of contractual specification in the alteration of a service [%]	63
5.4.3.1	Definition of Parameter	63
5.4.3.1.1	Explanation on Parameter Definition	63
5.4.3.2	Equation	63
5.4.3.3	Measure	63
5.4.4	P404: Punctuality of appointments for service alteration [Time]	63
5.4.4.1	Definition of Parameter	63
5.4.4.1.1	Explanation on Parameter Definition	64
5.4.4.2	Equation	64
5.4.4.3	Measure	64
5.4.5	P405: Punctuality of equipment delivery for service alteration [Time]	64
5.4.5.1	Definition of Parameter	64
5.4.5.1.1	Explanation on Parameter Definition	64
5.4.5.2	Equation	64
5.4.5.3	Measure	65
5.4.6	P406: Service alteration not complete and correct first time [%]	65
5.4.6.1	Definition of Parameter	65
5.4.6.1.1	Explanation on Parameter Definition	65
5.4.6.2	Equation	65
5.4.6.3	Measure	65
5.4.7	P407: Conformity and success of service alteration [%]	65
5.4.7.1	Definition of Parameter	65
5.4.7.1.1	Explanation on Parameter Definition	66
5.4.7.2	Equation	66
5.4.7.3	Measure	66
5.4.8	P408: Technical reliability of service within an agreed period after alteration [%]	66
5.4.8.1	Definition of Parameter	66
5.4.8.1.1	Explanation on Parameter Definition	66

5.4.8.2	Equation	66
5.4.8.3	Measure	66
5.4.9	P409: Response time of the alteration service [Time & %]	67
5.4.10	P410: Overall quality of the alteration process [OR]	67
5.4.11	P411: User friendliness of the means available to the customer for the operations he has to perform [OR]	67
5.4.12	P412: Organisational efficiency of service provider to carry out service alteration (SPO) [OR]	67
5.4.12.1	Definition of Parameter	67
5.4.12.1.1	Explanation on Parameter Definition	67
5.4.12.2	Equation	67
5.4.12.3	Measure	67
5.5	Customer Relationship Stage: Technical upgrade	68
5.5.1	P501: Time for technical upgrade of a service [Time]	70
5.5.1.1	Definition of Parameter	70
5.5.1.1.1	Explanation on Parameter Definition	70
5.5.1.2	Equation	70
5.5.1.3	Measure	70
5.5.2	P502: Successful technical upgrade within a specified period [%]	70
5.5.2.1	Definition of Parameter	70
5.5.2.1.1	Explanation on Parameter Definition	70
5.5.2.2	Equation	71
5.5.2.3	Measure	71
5.5.3	P503: Completeness of fulfilment of specification in the technical upgrade of a service [%]	71
5.5.3.1	Definition of Parameter	71
5.5.3.1.1	Explanation on Parameter Definition	71
5.5.3.2	Equation	71
5.5.3.3	Measure	72
5.5.4	P504: Punctuality of appointments for technical upgrade [Time]	72
5.5.4.1	Definition of Parameter	72
5.5.4.1.1	Explanation on Parameter Definition	72
5.5.4.2	Equation	72
5.5.4.3	Measure	72
5.5.5	P505: Outage time due to technical upgrade [Time]	72
5.5.5.1	Definition of Parameter	72
5.5.5.1.1	Explanation on Parameter Definition	73
5.5.5.2	Equation	73
5.5.5.3	Measure	73
5.5.6	P506: Technical upgrade not complete and correct first time [%]	73
5.5.6.1	Definition of Parameter	73
5.5.6.1.1	Explanation on Parameter Definition	73
5.5.6.2	Equation	73
5.5.6.3	Measure	74
5.5.7	P507: Conformity and success of technical upgrade [%]	74
5.5.7.1	Definition of Parameter	74
5.5.7.1.1	Explanation on Parameter Definition	74
5.5.7.2	Equation	74
5.5.7.3	Measure	74
5.5.8	P508: Technical reliability of service within an agreed period after technical upgrade [%]	74
5.5.8.1	Definition of Parameter	74
5.5.8.1.1	Explanation on Parameter Definition	74
5.5.8.2	Equation	75
5.5.8.3	Measure	75
5.5.9	P509: Overall quality of the technical upgrade process [OR]	75
5.5.10	P510: Provider ability to match the customer's wishes for conditions of achievement [OR]	75
5.5.11	P511: User friendliness of the means available to the customer for the operations he has to perform [OR]	75
5.5.12	P512: Organisational efficiency of SP to carry out technical upgrade (SPO) [OR]	75
5.5.12.1	Definition of Parameter	75
5.5.12.1.1	Explanation on Parameter Definition	76
5.5.12.2	Equation	76
5.5.12.3	Measure	76
5.5.13	P513: Competence and preparedness of SP for technical upgrade (SPO) [OR]	76

5.5.13.1	Definition of Parameter	76
5.5.13.1.1	Explanation on Parameter Definition	76
5.5.13.2	Equation	76
5.5.13.3	Measure	76
5.6	Customer Relationship Stage: Service Support	76
5.6.1	Documentation	77
5.6.1.1	P611: Documentation delivery time [Time]	77
5.6.1.1.1	Definition of Parameter	77
5.6.1.1.2	Equation	77
5.6.1.1.3	Measure	78
5.6.1.2	P612: Availability of documentation within specified period of time [%]	78
5.6.1.2.1	Definition of Parameter	78
5.6.1.2.2	Equation	78
5.6.1.2.3	Measure	78
5.6.1.3	P613: Integrity (correctness and completeness) of documentation [OR]	79
5.6.1.3.1	Definition of Parameter	79
5.6.1.3.2	Equation	79
5.6.1.3.3	Measure	79
5.6.1.4	P614: Modes of documentation [Number]	79
5.6.1.4.1	Definition of Parameter	79
5.6.1.4.2	Equation	80
5.6.1.4.3	Measure	80
5.6.1.5	P615: Legibility of documentation [OR]	80
5.6.1.5.1	Definition of Parameter	80
5.6.1.5.2	Equation	80
5.6.1.5.3	Measure	80
5.6.1.6	P616: Overall reliability of documentation services [OR]	80
5.6.1.6.1	Definition of Parameter	80
5.6.1.6.2	Equation	81
5.6.1.6.3	Measure	81
5.6.2	Technical support	81
5.6.2.1	P621: Accessibility of the technical support [%]	82
5.6.2.1.1	Definition of Parameter	82
5.6.2.1.2	Equation	82
5.6.2.1.3	Measure	82
5.6.2.2	P622: Technical solutions achieved within a specified period [%]	82
5.6.2.2.1	Definition of Parameter	82
5.6.2.2.2	Equation	83
5.6.2.2.3	Measure	83
5.6.2.3	P623: Number of attempts before successful solution [Number]	83
5.6.2.3.1	Definition of Parameter	83
5.6.2.3.2	Equation	83
5.6.2.3.3	Measure	83
5.6.2.4	P624: Integrity of technical solutions [OR]	83
5.6.2.4.1	Definition of Parameter	83
5.6.2.4.2	Equation	84
5.6.2.4.3	Measure	84
5.6.2.5	P625: Reliability of technical solutions achieved [%]	84
5.6.2.5.1	Definition of Parameter	84
5.6.2.5.2	Equation	84
5.6.2.5.3	Measure	85
5.6.2.6	P626: Modes of technical support [Number]	85
5.6.2.6.1	Definition of Parameter	85
5.6.2.6.2	Equation	85
5.6.2.6.3	Measure	85
5.6.2.7	P627: Recognition of the customer technical request [%]	85
5.6.2.8	P628: Response time of the technical support [Time & %]	85
5.6.2.9	P629: Request to technical support resolution time [Time & %]	86
5.6.2.10	P630: Frequency of customer requests to technical support [Number/Time]	86
5.6.2.11	P631: User friendliness of the technical support [OR]	86
5.6.3	Commercial support	86
5.6.3.1	P641: Accessibility of the commercial support [%]	87