

JJ-201.11

IP 携帯電話の通話品質評価法

I .<概要>

本標準では, VoLTE 等の IP 携帯電話サービスの総合品質指標として ITU-T 勧告 G.107.1[1]に準拠した R 値を用いることを前提として, この算出のためにサービス提供事業者が考慮すべき品質パラメータを特定し, その評価法を規定する. 品質パラメータや評価法に関しては, 該当する ITU-T 勧告に準拠することを基本とし, 国際標準化との整合を図ることとする.

JJ-201.11

A Method for Speech Quality Assessment of IP Mobile Telephony

I .<Overview>

The purpose of this standard

- taking account of the standardization trends of ITU-T and other organizations, to define a method of assessment with the overall quality index, the R value, specified in the ITU Recommendation G.107.1 as the overall quality index for IP mobile telephony services such as VoLTE and a method of assessment of parameters to complement the R value.

TTC Study Policies

- In principle, make sure that the standard conforms to related international/regional standards (ITU-T, ETSI, and TIA standards).
- Use the overall quality index, the R value, for IP mobile telephony services.
- Specify evaluation conditions and method of assessment for the calculation of the R value.
- In defining conditions and method of assessment, ensure the ease of assessment and fairness (strictness).

Ⅱ.<参考>

1. 国際勧告等の関連

本標準に対応する国際標準は無い。

2. 参照文書

[1] ITU-T G.107.1 (06/2015)

Wideband E-model

[2] ITU-T G.107 (06/2015)

The E-model, a computational model for use in transmission planning

JT-G.107 E-model 伝送計画のための計算モデル, 2003 年 4 月

[3] ITU-T P.76 (11/1988)

Determination of loudness ratings; fundamental principles

[4] ITU-T P.79 (11/2007)

Calculation of loudness ratings for telephone sets

ITU-T P.79 Annex G (11/2001)

Wideband loudness rating algorithm

[5] ITU-T G.113 (11/2007)

Transmission impairments due to speech processing

ITU-T G.113 Amendment 1 (03/2009)

ITU-T G.113 Amendment 1 (06/2006)

New Appendix IV – Provisional planning values for the wideband equipment impairment factor $I_{e,wb}$ Revised Appendix IV – Provisional planning values for the wideband equipment impairment factor and the wideband packet loss robustness factor

JT-G.113 音声信号処理による伝送劣化, 2003 年 4 月

Ⅱ.<References>

1. Relation with international standards and national standards

This standard is TTC original.

2. References

[1] ITU-T G.107.1 (06/2015)

Wideband E-model

[2] ITU-T G.107 (06/2015)

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[6] ITU-T P.833.1 (04/2009)

Methodology for the derivation of equipment impairment factors from subjective listening-only tests for wideband speech codecs

[7] ITU-T P.834.1 (06/2015)

Extension of the methodology for the derivation of equipment impairment factors from instrumental models for wideband speech codecs

[8] ITU-T P.862.2 (11/2007)

Wideband extension to Recommendation P.862 for the assessment of wideband telephone networks and speech codecs

[9] ITU-T P.863 (09/2014)

Perceptual objective listening quality assessment

[10] ITU-T P.863.1 (09/2014)

Application guide for Recommendation ITU-T P.863

[11] ITU-T P.501 (01/2012)

Test signals for use in telephony

ITU-T P.501 Amendment 1 (07/2012)

Test signals for use in telephony

ITU-T P.501 Amendment 2 (10/2014)

New Annex C – Speech files prepared for use with ITU-T P.800 conformant applications and perceptual-based objective speech quality prediction

[12] ITU-T P. Imp863 (11/2011)

[6] ITU-T P.833.1 (04/2009)

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ITU-T P.501 Amendment 2 (10/2014)

New Annex C – Speech files prepared for use with ITU-T P.800 conformant applications and perceptual-based objective speech quality prediction

[12] ITU-T P. Imp863 (11/2011)

Implementer's guide I for ITU-T P.863: Mapping function of P.863 results into MOS-LQO

[13] ITU-T G.122 (03/1993)

Influence of national systems on stability and talker echo in international connections

[14] ITU-T P.310 (05/2000)

Transmission characteristics for telephone-band (300–3400 Hz) digital telephones

[15] ETSI TS 101 329–5 (01/2002)

End-to-end quality of service in TIPHON systems; Part5: Quality of service (QoS) measurement methodologies

[16] ETSI TR 101 329–6 (02/2002)

End-to-end quality of service in TIPHON systems; Part 6: Actual measurements of network and terminal characteristics and performance parameters in TIPHON networks and their influence on voice quality

[17] ETSI TS 101 329–2 (01/2002)

End-to-end quality of service in TIPHON systems; Part2: Definition of speech quality of service (QoS) classes

[18] ITU-T E.500 (11/1998)

Traffic intensity measurement principles

[19] ETSI EG 201 769 (10/2000)

Implementer's guide I for ITU-T P.863: Mapping function of P.863 results into MOS-LQO

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[19] ETSI EG 201 769 (10/2000)

QoS parameter definitions and measurements; Parameters for voice telephony service required under the ONP voice telephony directive

[20] ITU-T P.800 (08/1996)

Methods for subjective determination of transmission quality

[21] ITU-T G.114 (05/2003)

One-way transmission time

[22] ITU-T G.131 (11/2003)

Control of talker echo

[23] ITU-T G.165 (03/1993)

Echo cancellers

JT-G.165 エコーキャンセラ, 2003 年 4 月

[24] ITU-T G.168 (02/2012(04/2015))

Digital network echo cancellers

[25] ITU-T P.830 (02/1996)

Subjective performance assessment of telephone-band and wideband digital codecs

[26] ITU-T P.810 (02/1996)

Modulated noise reference unit (MNRU)

[27] ITU-T G.191 (03/2010)

Software tools for speech and audio coding standardization

QoS parameter definitions and measurements; Parameters for voice telephony service required under the ONP voice telephony directive

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[24] ITU-T G.168 (02/2012(04/2015))

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[27] ITU-T G.191 (03/2010)

Software tools for speech and audio coding standardization

[28] ITU-T P.862 (02/2001)

Perceptual evaluation of speech quality (PESQ), an objective method for end-to-end speech quality assessment of narrow band telephone networks and speech codecs

[29] ITU-T P.56 (12/2011)

Objective measurement of active speech level

[30] ITU-T P.50 (09/1999)

Artificial voices

3. 改版の履歴

版数	制定日	改版内容
第1版	2015年11月12日	制定

4. 標準策定部門

網管理専門委員会

Ⅲ.<目次>

<参考>

1. 用語と定義
2. 関連する勧告・規定など
3. 規定範囲
4. 対象ネットワークと前提条件
 - 4.1 レファレンス接続系
 - 4.2 接続パターン
5. Wideband E-model 概要

[28] ITU-T P.862 (02/2001)

Perceptual evaluation of speech quality (PESQ), an objective method for end-to-end speech quality assessment of narrow band telephone networks and speech codecs

[29] ITU-T P.56 (12/2011)

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[30] ITU-T P.50 (09/1999)

Artificial voices

3. Change history

Version	Date	Outline
1	Nov. 12, 2015	Published

4. Working Group that developed this standard

Network Management Working Group

Ⅲ.<Table of contents>

<Reference>

1. Terminology and definition
2. Reference standard and specifications etc.
3. Scope
4. Target network and condition
 - 4.1 Reference network segment
 - 4.2 Connection pattern
5. Wideband E-model outline

6. R 値の評価方法

6.1 R 値パラメータの分類と要規定項目

6.2 各パラメータの評価方法

6.2.1 音質パラメータ評価法 (IeWB, Bpl, Ppl, Ie-effWB)

6.2.2 エコー評価法 (TELR)

6.2.3 遅延評価法 (T, Ta, Tr)

6.3 パラメータの測定条件

6.3.1 測定日、測定時間帯

6.3.2 評価サンプル時間

6.3.3 評価周期

7. R 値の解釈ガイドライン

8. R 値を補完するパラメータとその評価方法

8.1 遅延

8.2 エコー

8.3 音質

8.3.1 評価方法

8.3.2 R 値に対応した所要受聴 MOS 値

付録 I (参考) 欧米と日本の MOS 値の違い

付録 II (参考) POLQA の概要とアプリケーションガイドの要点

付録 III (参考) レファレンス条件を基準にした評価値の変換

付録 IV (参考) 相互接続環境における通話品質評価に関する留意事項

参考文献

6. R value evaluation

6.1 Classification of R parameters and items required definition

6.2 Evaluation method of each parameter

6.2.1 Acoustic parameter evaluation method (IeWB, Bpl, Ppl, Ie-effWB)

6.2.2 Echo evaluation method (TELR)

6.2.3 Delay evaluation method (T, Ta, Tr)

6.3 Monitoring condition of parameters

6.3.1 Monitoring day, monitoring time zone

6.3.2 Monitoring sample time

6.3.3 Monitoring period

7. Interpretation guideline of R value

8. Supplement parameters of R value and evaluation method

8.1 Delay

8.2 Echo

8.3 Acoustics

8.3.1 Evaluation method

8.3.2 Required hearing MOS value for R value

Appendix I The difference between Japanese MOS and Euramerican MOS

Appendix II Outline of POLQA and its Application Guide

Appendix III Conversion of the evaluated value based on reference condition

Appendix IV Notice on Speech Quality Assessment of IP Telephony between IP Networks

Bibliography