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**Speech and multimedia Transmission Quality (STQ);
IMS/PES/VoLTE exchange performance requirements**

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Speech and multimedia Transmission Quality (STQ).

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**may not**", "**need**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

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Introduction

As a general principle, ITU-T SG12 Q11/12 has the opinion that PSTN/ISDN emulation based on IMS architecture (or any other for that matter) should strive to be transparent to the end-user. Following this principle, the definitions of IMS/PES/VoLTE design objectives should be based on "best practice" performance of legacy PSTN/ISDN signalling. The values contained in the present document are "best practice" performance values measured on IMS and NGN implementations.

1 Scope

The present document contains design requirements applicable to IMS/PES/VoLTE exchange implementations based on Recommendation ITU-T Q.543 [1]. The definitions of IMS/PES/VoLTE design objectives are based on "best practice" performance of legacy PSTN/ISDN signalling. The values contained in the present document are "best practice" performance values measured on IMS and NGN implementations. The ISDN VGW values are based on carrier grade implementations.

The handling of preconditions is out of the scope of the present document.

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

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2.1 Normative references

The following referenced documents are necessary for the application of the present document.

- [1] Recommendation ITU-T Q.543: "Digital exchange performance design objectives".
- [2] ETSI TS 183 036: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); ISDN/SIP interworking; Protocol specification".
- [3] ETSI TS 124 229: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3 (3GPP TS 24.229)".
- [4] ETSI TS 183 043: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); IMS-based PSTN/ISDN Emulation; Stage 3 specification".
- [5] Recommendation ITU-T Q.541 (1993): "Digital exchange design objectives - General".
- [6] Recommendation ITU-T G.812 (2004): "Timing requirements of slave clocks suitable for use as node clocks in synchronization networks".
- [7] Recommendation ITU-T G.823: "The control of jitter and wander within digital networks which are based on the 2048 kbit/s hierarchy".
- [8] Recommendation ITU-T G.826 (12/2002): "End-to-end error performance parameters and objectives for international, constant bit-rate digital paths and connections".
- [9] ETSI TS 102 928: "Speech and multimedia Transmission Quality (STQ); End-to-End Transmission Planning Requirements for Real Time Services in an NGN context".

2.2 Informative references

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

Not applicable.