

ETSI TS 186 025-2 V2.2.1 (2011-06)

Technical Specification

Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); IMS/PES Performance Benchmark; Part 2: Subsystem Configurations and Benchmarks

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

[ETSI TS 186 025-2 V2.2.1 \(2011-06\)](https://standards.iteh.ai/catalog/standards/etsi/7bbd1ec4-556a-4a28-9fd6-d622769e8e4c/etsi-ts-186-025-2-v2-2-1-2011-06)

<https://standards.iteh.ai/catalog/standards/etsi/7bbd1ec4-556a-4a28-9fd6-d622769e8e4c/etsi-ts-186-025-2-v2-2-1-2011-06>



Reference

RTS/TISPAN-06062-NGN-R2

Keywords

IMS, ISDN, performance, PSTN**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 2011.
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	5
Foreword.....	5
1 Scope	6
2 References	6
2.1 Normative references	6
2.2 Informative references.....	7
3 Definitions and abbreviations.....	7
3.1 Definitions.....	7
3.2 Abbreviations	8
4 System Under Test (SUT)	9
5 Use cases	11
5.1 ISDN Use cases.....	11
5.1.1 ISDN - ISDN Use case 1	11
5.1.1.1 ISDN - ISDN Scenario 1.1 Basic call with BC = speech - enblock sending.....	11
5.1.1.2 ISDN - ISDN Scenario 1.2 Basic call with BC = speech - enblock sending.....	11
5.1.1.3 ISDN - ISDN Scenario 1.3 Basic call - overlap sending with BC = speech	11
5.1.1.4 ISDN - ISDN Scenario 1.4 Basic call with BC = 3,1 KHz audio - Fax with 33,6 kbit/s	11
5.1.1.5 ISDN - ISDN Scenario 1.5 Basic call with BC = 3,1 KHz audio - Fax with 14,4 kbit/s	11
5.1.1.6 ISDN - ISDN Scenario 1.6 Basic call with BC = 3,1 kHz with PI#3.....	11
5.1.1.7 ISDN - ISDN Scenario 1.7 Basic call with BC = 3,1 kHz with PI#3.....	11
5.1.1.8 ISDN - ISDN Scenario 1.8 Basic call with BC = 3,1 kHz - Modem V.32 bis (4,8 kbit/s, 9,6 kbit/s 14,4 kbit/s)	11
5.1.1.9 ISDN - ISDN Scenario 1.9 Basic call with BC = 3,1 kHz - Modem V.34 (up to 33,6 kbit/s)	12
5.1.1.10 ISDN - ISDN Scenario 1.10 Basic call with BC = UDI - enblock sending.....	12
5.1.1.11 ISDN - ISDN Scenario 1.11 Basic call with BC = UDI - enblock sending.....	12
5.1.1.12 ISDN - ISDN Scenario 1.12 - called user is user determined user busy	12
5.1.1.13 ISDN - ISDN Scenario 1.13 - no answer from the called user.....	12
5.1.2 ISDN - PSTN Use case 2	12
5.1.2.1 ISDN - PSTN Scenario 2.1 Basic call with BC = speech - enblock sending	12
5.1.2.2 ISDN - PSTN Scenario 2.2 Basic call with BC = speech - enblock sending	12
5.1.2.3 ISDN - PSTN Scenario 2.3 Basic call - overlap sending with BC = speech.....	12
5.1.2.4 ISDN - PSTN Scenario 2.4 Basic call with BC = 3,1 KHz audio - Fax with 33,6 kbit/s	12
5.1.2.5 ISDN - PSTN Scenario 2.5 Basic call with BC = 3,1 KHz audio - Fax with 14,4 kbit/s	12
5.1.2.6 ISDN - PSTN Scenario 2.6 Basic call with BC = 3,1 kHz - Modem V.32 bis (4,8 kbit/s, 9,6 kbit/s 14,4 kbit/s)	13
5.1.2.7 ISDN - PSTN Scenario 2.7 Basic call with BC = 3,1 kHz - Modem V.34 (up to 33,6 kbit/s).....	13
5.1.2.8 ISDN - PSTN Scenario 2.8 - called user is user determined user busy	13
5.1.2.9 ISDN - PSTN Scenario 2.9 - no answer from the called user	13
5.1.3 PSTN - ISDN Use Case 3	13
5.1.3.1 PSTN - ISDN Scenario 3.1 Basic call, the call is released from the calling user.....	13
5.1.3.2 PSTN - ISDN Scenario 3.2 Basic call, the call is released from the called user	13
5.1.3.3 PSTN - ISDN Scenario 3.3 Basic call with BC = 3,1 KHz audio - Fax with 33,6 kbit/s	13
5.1.3.4 PSTN - ISDN Scenario 3.4 Basic call with BC = 3,1 KHz audio - Fax with 14,4 kbit/s	13
5.1.3.5 PSTN - ISDN Scenario 3.5 Basic call with BC = 3,1 KHz audio - Modem V.90.....	13
5.1.3.6 PSTN - ISDN Scenario 3.6 - called user is user determined user busy	13
5.1.3.7 PSTN - ISDN Scenario 3.7 - no answer from the called user	14
5.1.4 PSTN - PSTN Use case 4	14
5.1.4.1 PSTN - PSTN Scenario 4.1 Basic call, the call is released from the calling user	14
5.1.4.2 PSTN - PSTN Scenario 4.2 Basic call, the call is released from the called user.....	14
5.1.4.3 PSTN - PSTN Scenario 4.3 Basic call with Fax with 33,6 kBit/s (Super G3 Fax)	14
5.1.4.4 PSTN - PSTN Scenario 4.4 Basic call with Fax with 14,4 kBit/s.....	14
5.1.4.5 PSTN - PSTN Scenario 4.5 Basic call with BC = 3,1 KHz audio - Modem V.34 (up to 33,6 kbit/s)	14

5.1.4.6	PSTN - PSTN Scenario 4.6 Basic call with BC = 3,1 KHz audio - Modem V.32 bis (4,8 kbit/s, 9,6 kbit/s 14,4 kbit/s).....	14
5.1.4.7	PSTN - PSTN Scenario 4.7 - called user is user busy	14
5.1.4.8	PSTN - PSTN Scenario 4.8 - no answer from the called user	14
5.2	Metrics and design objectives	15
5.2.1	Delay probability - non-ISDN or mixed (ISDN - non-ISDN) environment	15
5.2.2	Speech quality analysis	18
5.3	Call Profiler Traffic Patterns	19
5.3.1	Saw Tooth.....	19
5.3.2	Blast.....	19
5.3.3	Rolling Blast	20
5.3.4	Ramp.....	20
5.3.5	Steady Call Rate	20
5.3.6	Poisson Distribution.....	20
5.4	Load Concepts and Definitions	21
5.4.1	Processor Load.....	21
5.4.2	Reference Call and Workload Factors	21
Annex A (informative):	Calls flows.....	23
Annex B (informative):	Load profiles examples.....	30
Annex C (informative):	Load traffic calculation	31
C.1	General	31
C.2	Calculation base on originated/ terminated traffic	31
C.3	ITU-T load definitions.....	32
C.3.1	Reference loads	32
C.3.1.1	Reference load on incoming interexchange circuits	32
C.3.1.2	Reference load on subscriber lines (originating traffic).....	32
C.4	High load reserve	33
C.5	Overload	33
Annex D (informative):	Test reports.....	34
D.1	Example of a Call Detail report.....	34
D.2	Example of a call summary report	35
D.3	Example of a voice summary report.....	35
D.4	Example of a voice quality detail report.....	36
Annex E (informative):	Bibliography.....	37
Annex F (informative):	Change history	38
History		39

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://webapp.etsi.org/IPR/home.asp>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN).

The present document is part 2 of a multi-part deliverable covering the IMS/NGN Performance Benchmark, as identified below:

Part 1: "Core Concepts";

Part 2: "Subsystem Configurations and Benchmarks";

Part 3: "Traffic Sets and Traffic Profiles";

Part 4: "Reference Load network quality parameters".

Document Preview

[ETSI TS 186 025-2 V2.2.1 \(2011-06\)](http://standards.iteh.ai/catalog/standards/etsi/7bbd1ec4-556a-4a28-9fd6-d622769e8e4c/etsi-ts-186-025-2-v2-2-1-2011-06)

<https://standards.iteh.ai/catalog/standards/etsi/7bbd1ec4-556a-4a28-9fd6-d622769e8e4c/etsi-ts-186-025-2-v2-2-1-2011-06>