

International Telecommunication Union

**ITU-T**

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

**Q.3931.1**

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SERIES Q: SWITCHING AND SIGNALLING

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Testing for NGN networks

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**Performance benchmark for the PSTN/ISDN  
emulation subsystem of an IP multimedia  
system – Part 1: Core concepts**

Recommendation ITU-T Q.3931.1



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# Recommendation ITU-T Q.3931.1

## Performance benchmark for the PSTN/ISDN emulation subsystem of an IP multimedia system – Part 1: Core concepts

### Summary

Recommendation ITU-T Q.3931.1 describes the core concepts of testing to establish a performance benchmark for an initial release of a PSTN/ISDN emulation subsystem (PES). The same tests can be used also for legacy PSTN/ISDN networks or for interworking tests between a PSTN/ISDN emulation subsystem and legacy PSTN and ISDN. The metrics measured and reported are for performance of this subsystem under a communications application load. This Recommendation covers Part 1 – Core Concepts, the first of the four performance aspects.

### History

Edition	Recommendation	Approval	Study Group
1.0	ITU-T Q.3931.1	2011-03-16	11

## FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

## NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure, e.g., interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

## INTELLECTUAL PROPERTY RIGHTS

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at <http://www.itu.int/ITU-T/ipr/>.

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# Recommendation ITU-T Q.3931.1

## Performance benchmark for the PSTN/ISDN emulation subsystem of an IP multimedia system – Part 1: Core concepts

### 1 Scope

This Recommendation describes the core concepts of testing to establish a performance benchmark for an initial release of a PSTN/ISDN emulation subsystem (PES). The same tests can be used also for legacy PSTN/ISDN networks or for interworking tests between a PSTN/ISDN emulation subsystem and legacy PSTN and ISDN. The metrics measured and reported are for performance of this subsystem under a communications application load. The present document covers only the first of the following four performance aspects.

Part 1: Core concepts.

Part 2: Subsystem configurations and benchmarks.

Part 3: Traffic sets and traffic profiles.

Part 4: Reference load network quality parameters.

### 2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

- |                     |  |
|---------------------|--|
| [ITU-T Q.543]       | Recommendation ITU-T Q.543 (1993), <i>Digital exchange performance design objectives</i> .   |
| [ETSI TS 186 025-1] | ETSI TS 186 025-1 (2011), <i>Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); IMS/PES Performance Benchmark; Part 1: Core Concepts</i> .                           |
| [ETSI TS 186 025-2] | ETSI TS 186 025-2 (2011), <i>Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); IMS/PES Performance Benchmark; Part 2: Subsystem Configurations and Benchmarks</i> . |

### 3 Endorsement

The text of [ETSI TS 186 025-1] was approved by ITU-T as the basis for Recommendation ITU-T Q.3931.1 as modified below.

### 4 Modifications

#### Page 4, Intellectual Property Rights

Delete the whole section.

**Page 4, Foreword**

Delete the whole section.

**Page 5, Scope**

Replace the whole clause with the following:

"1 Scope

See clause 1, Scope, of Recommendation ITU-T Q.3931.1."

**Page 17, History**

Delete the whole section.



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