



International Telecommunication Union

ITU-T 2003 INFORMAL

FORUMS SUMMIT

ITU-T Study Group 12

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ITU-T Study Group 12
End-to-end transmission performance of
networks and terminals

Lead Study Group on Quality of Service and Performance

Responsible for guidance on the **end-to-end transmission performance** of networks, terminals and their interactions, in relation to the **perceived quality** and **acceptance by users** of text, speech, and image applications. This work includes the related transmission implications of **all networks** (e.g., those based on PDH, SDH, ATM and IP) and all telecommunication terminals (e.g., handset, handsfree, headset, mobile, audiovisual, and interactive voice response).



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SG12 as the QoS Lead SG

- *Internal to the ITU-T, provide a **common overview** for QoS activities that can be used to identify, communicate and resolve QoS-related issues.*
- *External to the ITU-T, improve the **visibility and utilisation of ITU-T expertise in QoS**, and better leverage this expertise in specifications being developed elsewhere in the industry.*
- **G. 1000 Series : "Quality of service and Performance -Generic and User-Related Aspects"**
- **Rec G.1000 : "Communications Quality of Service : a framework and definitions"**
- **Rec G.1010 : "End- user multimedia QoS categories"**



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SG12

Chairman : JY Monfort (France Telecom)

Vice-Chairmen :

C. Dvorak (AT&T), K. Adler (Vodafone)

Councillor : J. Katona-Kiss

Q.15 :

QoS and Performance
Coordination
C. Dvorak

Q1 :

Work Programm, Definitions,
Handbook
JY Monfort

WP1

Chairman
R. Ceruti
(Telecom Italia)

WP2

Chairman
K. Adler
(Vodafone)

WP3

Chairman
P. Coverdale
(Nortel Networks)



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Working Party 1 Telephony and terminals

- **Q.3/12** : Transmission characteristics of **speech terminals** both for **fixed** circuit-switched and **mobile** networks.
Rapporteur : R. Ruhala (Univ. South Indiana)
In Progress : Revision and new features of P.313 (Mobile and wireless voice terminals)
Evolution of existing P.3xx series for terminals
- **Q. 4/12** : Telephonometric methodologies for **handsfree** terminals and **speech enhancement** devices (including **AEC** and **Noise Reduction**).
Rapporteur : V. Gautier-Turbin (FTR&D)
Recently approved : P.330 (for AEC and Noise Reduction)
- **Q.5/12** : **Telephonometric** methodologies for handset and **headset** terminals. Rapporteur : L. Madec (Itek/B&K)
Recently finalised : A round robin test on the use of HATS -4 laboratories-
In progress : new Rec P.380 for Headsets
- **Q.6/12** : **Analysis** methods using **complex** measurements **signals**. Rapporteur : H. Gierlich (DT/ HA)
In progress : Revision of P. 501(new signals data base), New Rec P.OQN **Objective Quality Number**



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Working Party 2 Performance, planning and assessment

- o **Q.7/12** : Methods, tools and test plans for the **subjective assessment** of speech and audio quality.
Rapporteurs : P. Usai (ETSI)
In Progress : Revision of P.84; a new Rec P.NSA (for noise suppr.)
Permanent activity : test plans and test report for speech coders
- o **Q. 8/12** : Extension of the **E-Model**. Rapporteurs : U. Jekosh, S. Möller (DT/Ruhr University)
In progress : Evolution of the model for conversation situations
G. 107 is permanently updated
- o **Q.9/12** : **Objective** measurement of speech quality under conditions of **non-linear** and **time variant processing**. Rapporteur : J. Berger (Swissvoice)
In progress : two new rec. P.SEAM and PAAM to complete P.862 (regularly updated)
- o **Q.10/12** : **Transmission planning** for voiceband, data and multimedia services. Rapporteur : V. Sypli (RTP)
Recently approved : Revision of G.114 (on delay)
In progress : revision of G.101 (transmission plan)
- o **Q.11/12** : **Speech transmission planning** for multiple interconnected networks (e.g. public, private, internet). Rapporteur : J. Pomy (Ténovis)
New G.108.2 and permanent updatings of Rec. On Planning



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Working Party 3 QoS over IP

- **Q.2/12** : **Speech Transmission** Characteristics and measurement methods for **terminals and Gateways** interfacing Packet-Switched (**IP**) **networks**. Acting Rapporteur : U. Brunner (Ténovis)
In progress : P.Voip and P.GTWY for IP terminals and Gateways (transmission quality and assessment)
- **Q. 12/12** : **Transmission performance** considerations for **voiceband services** carried on networks that use **Internet Protocol**. Acting Rapporteur : D. Mustill (BT Exact)
In progress: G.IPP (transmission performance parameters for IP)
- **Q.13/12** : **QoS/performance Multimedia** requirements. Rapporteur : P. Coverdale (Nortel Networks)
Concept of QoE
In progress : New Rec G.MMPERF (Multimedia performance requirement)
- **Q.14/12** : **Effects of interworking** between multiple IP domains on the **transmission performance** of VoIP and voice band services. Rapporteur : D. Mustill (BT Exact)
In progress : new Rec.G.TrIP Islands
- **Q.16/12** : In service non-intrusive assessment of voice transmission performance Rapporteur : V. Barriac (FTR&D)
Recently approved : Revision of G.561 (INMD)
In progress : anew assessment model for voice quality (P.VTQ)



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Some more informations about ITU-T SG 12

- o Available on the SG12 web page
<http://www.itu.int/ITU-T/studygroups/com12/index.asp>
- o Executive Summary of the last SG12 Meeting (January 2003)
<http://www.itu.int/ITU-T/studygroups/com12/meet0103.pdf>



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Relationship between SG 12 and other bodies

- The different workshops, recently organised or planned for the end of 2003 will increase these relations
- For the time being the main relations are with
 - ETSI (STQ, Tiphon -in the future with the new TC-, HF). Items: transmission planning, terminals performance, VoIP and User interfaces
 - T1A1 and TIA (on the same domains as ETSI)
 - IEEE (mainly on acoustics and Terminals assessment)
 - IETF (classes of services, testing,...)



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Workshop "End to End Quality of Service. What is it? How do we get it?" Geneva, 1-3 october 2003

- o The overall objectives for the workshop are:
 - Harmonize the different approaches to common understanding of end-to-end QoS
 - Identify obstacles to achieving end-end QoS
 - Propose actions to overcome these obstacles
 - Create bridges between different aspects of QoS



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QoS Workshop Programm

- Day 1 - Wednesday 1st October 2003
 - **Session 1 - Economic impacts and stakes of the QoS.**
 - Objectives: *Highlight the impact of the telecommunication services' quality on macro and micro economy; explain the current economic situation and the globalization and their impact on the quality of telecommunication services. Analyze the impact of Risk Management and Revenue Assurance activities on quality of service; the use of SLAs and the impact on the quality*
 - **Session 2 - User experience**
 - Objectives: *Highlight importance of satisfying end-user expectations for QoS - introduce concept of Quality of Experience (QoE). Provide guidance on end-user performance requirements for various types of applications. Provide examples of real-life operational experience of end-user QoE. Identify further work required in understanding end-user requirements, and the Standards and other Bodies that need to be involved.*
- Day 2 Thursday 2nd October 2003
 - **Session 3 - QoS in the different standardization bodies**
 - Objectives: *Define the fields covered by the respective standard bodies, type of products and working methods. Summarize the main results obtained, focused on the main issues to be solved, and the main objectives for the next years. Define the types and the possible ways of cooperation expected with the other bodies.*
 - **Session 4 - Performance Metrics and Measurement Techniques**
 - Objectives: *Introduce and define the key performance parameters which are important for characterising end-user experience and service acceptability. Describe suitable techniques (active and passive) that can be used for measuring these parameters. Highlight on-going work in Standards and other Bodies in this area and identify further work required in understanding performance metrics and developing associated measurement techniques*
- Day 3 Friday 3 October 2003
 - **Session 5 - Specification and Signalling of IP QoS Classes**
 - Objectives: *Define the Quality of Service (QoS) requirements for IP-based networks supporting telephony in addition to traditional Internet applications, and explore how those requirements will be communicated and supported in a multi-provider environment.*
 - **Session 6 - Overall Panel Discussions and Conclusions**
 - For the detailed information please visit: <http://www.itu.int/ITU-T/worksem/>
- Other bodies involved in this forum : IETF, T1, ETSI, 3GPP, TOG, TMF, DSL (some of them to be confirmed during IFS 2)
- This workshop should give the possibilities of future close cooperations.



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Workshop on Telecoms and Vehicles.

Geneva, 24-25 november 2003

- Preliminary programm (call for contribution will be closed at the end of july)
<http://www.itu.int/ITU-T/worksem/telecomauto/call.html>
 - **Area 1: Communications (voice and audiovisual services)**
 - **Area 2: Mobile office (data and multimedia services)**
 - **Area 3: Diagnostics and Telematics**
 - **Area 4: Safety (vehicle and passenger safety, emergency services)**
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- Contacts in progress with ISO, IEC, W3C, ERTICO,...