

COMMITTEE T1
CONTRIBUTION

Document Number T1A1/95-066
Document Number T1A1.5/95-154 R1

STANDARDS PROJECT: Analog Interface Performance Specifications for Digital
Video Teleconferencing/Video Telephony Service

TITLE: Proposed U.S. Contribution to Study Group 12 Q22
(Audiovisual Quality in Multimedia Systems)
Entitled:
"Selections from Draft American National Standard: -
Digital Transport of One-Way Signals -
Parameters for Objective Performance Assessment"

ISSUE ADDRESSED: Video Quality, Multimedia Quality

SOURCE: NTIA/ITS - Arthur Webster

DATE: December 11, 1995

DISTRIBUTION TO: T1A1.5

KEYWORDS: Video Teleconferencing, Video Telephony, Video Quality,
Subjective Quality, Objective Quality, Multimedia

**Proposed U.S. Contribution to Study Group 12 Q22
(Audiovisual Quality in Multimedia Systems)**

Entitled:

"Selections from Draft American National Standard: - Digital Transport of One-Way Signals - Parameters for Objective Performance Assessment"

This text was submitted to SG12 at the September 1995 meeting as a Temporary Document from the Rapporteur. Working Party 2/12 asked that the contribution be re-submitted as a white document.

The contribution consists of an abstract (attached) and the text of draft T1.801.03 beginning with the Table of Contents and continuing through the end of the standard which is the end of Annex C, the Bibliography.

Question: 22/12, 2/15, and 3/15

SOURCE: USA (Proposed) (*)

TITLE: Selections from the Draft American National Standard: - Digital transport of one-way signals - parameters for objective performance assessment

This contribution provides selections from the draft American National Standard which offers a framework for the objective quality assessment of one-way video signals. This text was submitted to SG12 at the September 1995 meeting as a Temporary Document (TD 54-E WP2/12) from the Rapporteur. Working Party 2 of Study Group 12 asked that the contribution be re-submitted as a white document.

Historically in voice, data, and television services, subjective and (in the case of data) error ratio tests were originally the basis for selection of encoding and decoding processes. However, frameworks of objective parameters were established and verified through extensive testing and gained Industry acceptance as appropriate measures for the operation of in-service systems. A similar approach is the basis for this initial framework standard for objective video performance assessment. The purpose of this standard is to assure the uniform application of, provide a framework for, and provide definitions of standard video performance parameters for one-way video signals transported digitally by portions of the telecommunications network.

The following applications are beyond the scope of this standard:

1) Measuring the following performance aspects of a video system: audio, audio-visual interaction, and any implications of full duplex working (e.g. round-trip delay that reduces the conversational spontaneity).

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2) Discrimination between two or more similar systems is beyond the accuracy of the objective measurements defined in this standard at this time. Subjective testing would be most appropriate in these cases, and definition of subjective test methods is also beyond the scope of this standard. Experimental results indicate that the objective measures presented here are insufficient to predict viewer responses with the accuracy needed to discriminate similar systems. For example, small negative changes in these measurements may sometimes correlate with subjective quality improvement.

3) Measuring the performance aspects of one-way video systems where the input and output interfaces shown in Figure 1 are not accessible.

4) Measuring most performance aspects of the color-difference signals of the one-way video system shown in Figure 1.

The initial application for this standard is:

1) Detecting the continued operational readiness of one-way video systems utilizing digital transport facilities.