

**COMMITTEE T1  
CONTRIBUTION**

Document Number:  
T1A1.5/93-173

\*\*\*\*\*

**STANDARDS PROJECT:** All T1A1.5 Projects Addressing End-to-End  
User Performance Objectives

\*\*\*\*\*

**TITLE:** Performance Objectives From the User's  
Point-of-View

\*\*\*\*\*

**ISSUE ADDRESSED:** The Need for a New Paradigm to Articulate  
User Performance Objectives for Audiovisual/  
Multimedia Telecommunications Services.

\*\*\*\*\*

**SOURCE:** Granger Kelley  
National Communications System  
Tel: (703)692-4777  
Fax: (703)746-4960

\*\*\*\*\*

**DATE:** 9 November 1993

\*\*\*\*\*

**DISTRIBUTION TO:** T1A1.5

\*\*\*\*\*

**DISCLAIMER:** This contribution is submitted for  
information only to invite comment by the  
T1A1.5 membership on the attached NCS  
sponsored standardization initiative.

\*\*\*\*\*



**PERFORMANCE OBJECTIVES**  
**USER'S POINT-OF-VIEW**

**1. PROBLEM:**

Bandwidth limitations within the network have conditioned the user to expect limitations in the quality provided by most telecommunications services. With the emergence of broadband networks, bandwidth limitations are being drastically reduced and can be considered as non-existent for many applications. Unfortunately, the approach being taken by standards development activities specifying performance objectives for these new services is still based on the old "constrained" point-of-view and requires a major overhaul if user expectations are to be fully realized.

**2. DISCUSSION:**

The essence of a user's requirement for telecommunication service is the right combination of price, performance, and features necessary to satisfy that particular need. The current paradigm for specifying performance (quality) objectives for telecommunication service is based on the constraints of the existing Public Switched Telecommunications Network (PSTN). This paradigm:

- lacks the flexibility to address performance objectives which may change dynamically within a single session, such as will be the norm for most Multimedia service applications;
- does not adequately treat the question of price/performance trade-offs which will become a critical user concern as bandwidth becomes more plentiful and user expectations are no longer bandwidth limited;
- ignores the question of "baseline" performance objectives for those applications which may cross one or more of the B-ISDN, ISDN, PSTN, or Mobile network boundaries.

Study Group 1 of the Telecommunications Sector of the International Telecommunications Union (ITU-T, formally the CCITT) is responsible for defining international telecommunications services from the user's point-of-view, and has begun work on a set of service descriptions for Multimedia and Broadband ISDN. An important feature of these Service Descriptions will be a statement of the performance objectives to be achieved by the service being described. Since the Study Group 1 effort is still in the formative stage, the NCS has a unique (but time sensitive) opportunity to play a significant role in determining how user performance objectives are treated in these and future international standards.

### 3. RECOMMENDATION:

To ensure that the current opportunity for advancing NCS performance objectives in the development of international telecommunications standards is fully exploited, it is proposed that the Digital Telecommunications Quality Subcommittee consider developing a contribution for submission to ITU-T Study Group 1 outlining the need for a new approach in the development of performance objectives for telecommunications services.

Considering that ITU-T Study Group 1 plans to meet in Geneva between 18-28 January, 1994, the following steps are suggested for preparing such a contribution should the Group agree to do so:

Step 1 - An initial round of correspondence, to be completed prior to 5 November, to provide those interested with an opportunity to express their views concerning the performance objective issue and the approach being proposed for its resolution.

Step 2 - A second round of correspondence, to be initiated by Fax on 12 November, summarizing the response received in Step 1, identifying any differences of opinion or other issues which should be considered by the Subcommittee; and providing an initial draft of the proposed contribution.

Step 3 - A third round of correspondence, to be initiated by Fax on 3 December, to finalize the draft contribution for submission to Study Group "A" of the U.S. National Committee for ITU-T.

Step 4 - Present the approved Subcommittee contribution to Study Group "A", at their 5 January 1994 meeting for approval as a U.S. Contribution to ITU-T SG 1.

In order to initiate STEP 1, it is proposed that those who are interested in participating in the discussion effort review the above statement of the problem, together with the associated discussion, and provide your comments by Fax prior to 12 November. Answers to the following Questions would be of particular interest:

- Are there other deficiencies in the current approach for articulating performance objectives which should also be considered?
- Are there additional Quality or Performance parameters which should be specified in addition to those traditionally used to state performance objectives?
- Are there other suggestions as to how to better represent the user's performance objectives in the national and international standardization process?