19

Annex 13

Question 22/9

MEASUREMENT AND CONTROL OF THE QUALITY OF SERVICE OF DIGITAL SOUND-PROGRAMME AND TELEVISION TRANSMISSION ~~ON CONTRIBUTION AND/OR DISTRIBUTION~~ NETWORKS

1 Type of Question

Task-oriented Question that should eventually result in a set of Recommendations.

2 Motivation

The ITU-T has adopted Recommendations J.80, J.81, J.83 and J.84 for the transmission of digital television signals for contribution and/or distribution applications.

In the analogue world, there is a direct relationship between the Quality of Service (QoS) of television transmission and network impairments. This is not the case for digital transmission networks: at this moment the laws of addition for impairments measured in networks containing digital sections or mixed analogue and digital sections are not yet fully documented. It is therefore important to study the laws of addition of impairment in digital and in mixed analogue-and-digital networks for sound-programme and for television transmission.

There is a need to identify-the group of parameters which can provide objective measurement of QoS and real-time monitoring and control thereof along digital or mixed analogue-and-digital sound-programme and television transmission netwoerks.~~the transmission chain~~.

3 Questions

3.1 What are the parameters to be measured, the test signals and the methods of measurement to characterize the quality of digital sound-programme and television transmission?

3.2 What are the laws of addition for those parameters in fully digital networks? (this includes the case where the digital coding format of the signal may be changed between sections)?

3.3 What are the laws of addition for the parameters which describe the performance of sound-programme and television networks when the networks contain some analogue and some digital sections?

3.~~2~~4 How do such measurements correlate to the Quality of Service (QoS)?

3.~~3~~5 Which are the network parameters that can be dynamically adjusted for the supervision and control of QoS in digital television transmission networks?

3.~~6~~4 How can such supervision and control be implemented in operation?

4 Expected results and anticipated target dates

A first draft Recommendation should be ready before the end of 1998.

5 Liaison activity

Liaison should be established with ITU-T Study Groups 13, 15 and 16, and with ITU-R Working Party 11E.