

QUESTION ITU-R 122/6

Objective perceptual audio quality measurement methods

(2006)

The ITU Radiocommunication Assembly,

considering

- a) that conventional objective measurement methods (e.g. for measuring signal-to-noise ratio and distortion) may no longer be adequate in assessing systems which use low bit-rate coding schemes or which employ analogue or digital signal processing;
- b) that low bit-rate coding schemes are rapidly being deployed both at intermediate audio quality levels, which is corresponding to be equivalent to or better than a good reception of FM or AM analogue broadcasting services, and in multichannel configurations;
- c) that not all implementations conforming to a specification or standard guarantee the best quality achievable within that specification or standard;
- d) that formal subjective assessment methods are not always suitable for the monitoring of audio quality under operational conditions;
- e) that objective perceptual measurement methods may eventually complement or supersede conventional objective measurement methods in all areas of measurements;
- f) that Recommendation ITU-R BS.1116 is focusing on the subjective measurement of audio signals for high-quality audio in mono, stereo and multichannel configurations;
- g) that Recommendation ITU-R BS.1534 is recommended for the subjective assessment of audio quality at intermediate audio quality;
- h) that Recommendation ITU-R BS.1387 was validated with subjective data derived with Recommendation ITU-R BS.1116 only, and is focusing on the objective measurement of mono and stereo signals at high-quality audio only;
- j) that several broadcasters have already introduced or planned digital broadcasting services whose audio quality is at intermediate quality as defined in Recommendation ITU-R BS.1534;
- k) that several broadcasters have already introduced or planned digital broadcasting services transmitting multichannel audio signals;
- l) that objective perceptual measurement methods may usefully complement subjective assessment methods,

decides that the following Question should be studied

- 1 What are the characteristics of perceptual models which correlate well with perceived audio quality at intermediate audio quality levels?
- 2 What are the characteristics of perceptual models which correlate well with perceived audio quality for multichannel signals?
- 3 How may these models be used in the assessment of audio quality?
- 4 What are the parameters of quality which can be measured by objective perceptual methods?
- 5 What are the possibilities for defining a set of test signals to be used in the objective perceptual measurement of audio quality?
- 6 By what criteria should the measurement methods be assessed?

further decides

- 1 that the results of the above studies should be addressed to:
 - include in a revision of Recommendation ITU-R BS.1387-1;
 - prepare (a) new Recommendation(s);
 - prepare (a) new Report(s);
- 2 that the above studies should be completed by 2007.

Category: S1/AP