



Question(s): 14/12

Stockholm, 7 September 2012

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Source: ITU-T Study Group 12 (Stockholm, 7 September 2012)

Title: Announcing consent of new P.1200-series Recommendations

LIAISON STATEMENT

For action to:

For comment to:

For information to: SG9, SG16, VQEG, 3GPP SA4, ETSI STQ, ETSI STQ Mobile, ATIS IIF, Broadband Forum (BBF), IETF XRBLOCK WG

Approval: Agreed to at WP2/12 meeting

Deadline:

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Study Group 12 is happy to announce that five new ITU-T Recommendations have been consented at the ITU-T Study Group 12, Working Party 2 meeting in Stockholm on the 7th September related to new objective models for predicting audio, video and audiovisual quality of media streams. The five Recommendations are:

- Recommendation ITU-T P.1201 (2012) Parametric non-intrusive assessment of audiovisual media streaming quality
- Recommendation ITU-T P.1201.1 (2012), Parametric non-intrusive assessment of audiovisual media streaming quality – lower resolution application area
- Recommendation ITU-T P.1201.2 (2012), Parametric non-intrusive assessment of audiovisual media streaming quality – higher resolution application area
- Recommendation ITU-T P.1202 (2012) Parametric non-intrusive bitstream assessment of video media streaming quality
- Recommendation ITU-T P.1202.1 (2012), Parametric non-intrusive bitstream assessment of video media streaming quality – lower resolution application area

Summaries of these new Recommendations are provided below.

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Recommendation ITU-T P.1201 Parametric non-intrusive assessment of audiovisual media streaming quality

Recommendation ITU-T P.1201 provides an overview of algorithmic models for non-intrusive monitoring of the audio, video, and audiovisual quality of IP-based video services based on packet-header information. P.1201 addresses two application areas:

- P.1201.1 specifies the model algorithm for the lower resolution/LR (formerly referred to as low-bitrate, LBR) application area, including services such as mobile TV.
- P.1201.2 specifies the model algorithm for the higher resolution/HR (formerly referred to as high-bitrate, HBR) application area, including services such as IPTV.

The ITU-T Study Group 12 work item that resulted in this new recommendation was formerly referred to as P.NAMS (Non-intrusive parametric model for the assessment of performance of multimedia streaming). Hence, this short-title is retained for easier reference.

The two P.NAMS model algorithms are no-reference (i.e. non-intrusive) models which operate by analysing packet header information as available from respective packet trace data, provided to the model algorithms in the packet capture format (PCAP). Further input information on more general aspects of the stream, such as the video resolution, which may not be available from packet header information, is provided to the model algorithm out-of band, for example in form of stream-specific side information.

As output, the model algorithms provide individual estimates of audio, video and audiovisual quality in terms of the 5-point ACR (absolute category rating) MOS (mean opinion score) scale. Further, diagnostic information on causes of quality degradations can be made available, too.

Recommendation ITU-T P.1201.1 (2012), Parametric non-intrusive assessment of audiovisual media streaming quality – lower resolution application area

Recommendation ITU-T P.1201.1 specifies the algorithmic model for the lower resolution/ (LR) (formerly referred to as low-bitrate, LBR) application area of P.1201. The P.1201 series of documents specifies models for monitoring the audio, video and audiovisual quality of IP-based video services based on packet-header information. The respective ITU-T work item has formerly been referred to as P.NAMS (parametric non-intrusive assessment of audiovisual media streaming quality).

The lower resolution application area of the P.1201.1 part of P.1201 can be applied to the monitoring of performance and quality of experience (QoE) of video services such as Mobile TV. The algorithm for the higher resolution case is specified in P.1201.2. See P.1201 for details and respective application ranges and limitations of use.

Recommendation ITU-T P.1201.2 (2012), Parametric non-intrusive assessment of audiovisual media streaming quality – higher resolution application area

Recommendation ITU-T P.1201.2 specifies the algorithmic model for the higher resolution (HR) (formerly referred to as high-bitrate, HBR) application area of P.1201.

The P.1201 series of documents specifies models for monitoring the audio, video and audiovisual quality of IP-based video services based on packet-header information. The respective ITU-T work item has formerly been referred to as P.NAMS (Parametric Non-intrusive Assessment of

audiovisual Media Streaming quality). The higher resolution application area of the P.1201.2 part of P.1201 can be applied to the monitoring of performance and quality of experience (QoE) of video services such as IPTV. The algorithm for the lower resolution case is specified in P.1201.1. See P.1201 for details and respective application ranges.

Recommendation ITU-T P.1202 (2012), Parametric non-intrusive bitstream assessment of video media streaming quality

Recommendation ITU-T P.1202 provides an overview of algorithmic models for non-intrusive monitoring of the video quality of IP-based video services based on packet-header and bitstream information. P.1202 addresses two application areas:

- P.1202.1 specifies the model algorithm for the lower resolution/LR (formerly referred to as low-bitrate, LBR) application area, including services such as mobile TV.
- The model algorithm for the higher resolution/HR (formerly referred to as high-bitrate, HBR) application area, which includes services such as IPTV. This application area is currently under study but not yet completed.

The ITU-T Study Group 12 work item that resulted in this new recommendation was formerly referred to as P.NBAMS (Parametric non-intrusive bitstream assessment of video streaming quality). Hence, this short-title is retained for easier reference.

The P.NBAMS model algorithms are no-reference (i.e. non-intrusive) models which operate by analysing packet header and bitstream information as available from respective packet trace data, provided to the model algorithms in the packet capture format (PCAP). Further input information on more general aspects of the stream which may not be available from packet header and bitstream information, is provided to the model algorithm out-of band, for example in form of stream-specific side information.

As output, the model algorithms provide individual estimates of video quality in terms of the 5-point absolute category rating (ACR) mean opinion score (MOS). Further, diagnostic information on causes of quality degradations can be made available, too, since different types of performance parameters are derived during model calculations.

Recommendation ITU-T P.1202.1 (2012), Parametric non-intrusive bitstream assessment of video media streaming quality – lower resolution application area

Recommendation ITU-T P.1202.1 specifies the algorithmic model for the lower resolution (LR, formerly referred to as low-bitrate, LBR) application area of P.1202. The P.1202 series of documents specifies models for monitoring the video quality of IP-based video services based on packet-header and bitstream information. The respective ITU-T work item has formerly been referred to as P.NBAMS (parametric non-intrusive bitstream assessment of video media streaming quality). The lower resolution application area of the P.1202.1 part of P.1202 can be applied to the monitoring of performance and quality of experience (QoE) of video services such as Mobile TV.
