RECOMMENDATION ITU-R BT.1689*

Guidelines on the presentation in large-screen digital imagery environments of programmes that are provided in image formats conforming to Recommendation ITU-R BT.601

(Question ITU-R 15/6)

(2004)

The ITU Radiocommunication Assembly,

considering

a)   that it is very desirable that large-screen digital imagery (LSDI) presentations should offer the best possible image and sound quality provided by correct use of current technology;

b)   that Recommendation ITU-R BT.1680 recommends baseband imaging formats for distribution of LSDI applications intended for presentation in a theatrical environment, and that all those image formats have a higher resolution than the 525/625 image formats;

c)   that nevertheless there may be a need in early implementations to present some content, such as local advertising or legacy programmes, in an LSDI environment, that is only available in a 525/625 image format; for instance this may be the case of some legacy programmes, or of some commercials or promos;

d)   that various methods currently exist to preserve the perceived picture quality of digital component programmes to closely approach their native one, through the use of technically correct procedures in programme production, postproduction, delivery and presentation;

e)   that projectors used for LSDI applications typically rescale images to remove line structures and to match the native pixel structure of the projector,

recommends

1   that when content is not available in conformance with other ITU-R LSDI image formats, it should be provided in digital component form in an image format conforming to Recommendation ITU-R BT.601;

2   that LSDI venues and/or associated ingest points should make provision to accept content in image formats conforming to Recommendation ITU-R BT.601, in addition to image formats provided in other ITU-R LSDI Recommendations;

3   that an acceptable alternative for formats conforming to Recommendation ITU-R BT.601 could be up-convert to one of the LSDI image formats prior to delivery to the LSDI venue or ingest point;

4   that steps should be taken to avoid introducing image impairments during production, postproduction, delivery and presentation of such content. Some such steps are exemplified as follows:

–   In production and postproduction, images should remain in their full-quality 4:2:2 digital component representation; they should not be down-sampled, further filtered or transcoded to an analogue component or a composite representation.

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*   Radiocommunication Study Group 6 made editorial amendments to this Recommendation in 2007 in accordance with Resolution ITU-R 44.

–   In delivery, the applied bit-rate reduction should not exceed the one that provides for perceptually transparent compression, even on critical images.

–   In presentation, the algorithms, if any, built in the projector to adapt the input images to its display characteristics should be transparent to picture quality, and all appropriate methods, such as rescaling should be used, in order to present the most pleasant image possible.