RECOMMENDATION ITU-R BT.1690

Assumed characteristics of venues intended for large-screen digital imagery programme presentation in a theatrical environment

(Question ITU-R 15/6)

(2004)

The ITU Radiocommunication Assembly,

considering

a) that various applications potentially exist for large-screen digital imagery (LSDI), based on various presentation environments;

b) that, in view of this variety of presentation environments, it is necessary to make assumptions on the presentation characteristics intended for an LSDI application, in order to identify appropriate technical solutions for it;

c) that such assumptions would best be based on documentation relevant to other applications, if any, intended for similar presentation purposes;

d) that a priority LSDI application is the presentation of programmes in a theatrical environment,

recommends

1 that the presentation characteristics broadly outlined in Annex 1 should be used as a guide in verifying technical solutions appropriate to LSDI applications intended for programme presentation in a theatrical environment;

2 that those presentation characteristics should not be deemed to represent mandatory implementation specifications, since the characteristics of LSDI presentation venues may vary greatly, depending, among other factors, upon local conditions and audience preferences.

Annex 1

Assumed characteristics of venues intended for LSDI programme presentation in a theatrical environment

It is assumed that the main presentation characteristics of venues intended for LSDI programme presentation in a theatrical environment are the ones listed below:

– the LSDI presentation venue is generally darkened;

– the screen size and positioning should be adequate to provide the impression of spaciousness and presence typical of large appearing screen images (see for instance SMPTE EG 5) without being overwhelming;

– the luminance level of image peak whites on the screen in the LSDI presentation venue is of the order of 40 cd/m^2 [1], within a rather broad tolerance that depends on the specific environment;

– the colour rendition of the images projected on the screen, and the impression of resolution they provide, reasonably match the impression of colour rendition and resolution obtained when watching the LSDI programme master in a controlled environment, such as in a television viewing room;

– stray light falling on the screen is sufficiently low to allow reasonable presentation of the contrast ratio of the images recorded on the LSDI programme master;

– the position, level, balance and frequency response of the loudspeaker arrays in the LSDI presentation venue can accommodate 5.1 multichannel sound;

– spurious noise within the LSDI presentation venue is low enough not to detract from the enjoyment of the presentation.

NOTE 1 – ISO Standard 12608-1996 is available in electronic version at the following address: http://www.iso.org/itu.

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[1] The Table below summarizes, for assumption purposes, the main characteristics of television viewing conditions for evaluating telecine transfer of film images on a television display, as specified in Recommendation ITU-R BR.1355, which makes reference to ISO 12608-1996. These are designed for viewing under some ambient light.

Parameter	Value
Nominal luminance at screen centre	80 cd/m^2
Chromaticity of screen at reference white	Close to illuminant D_{65}
Stray light falling on screen (display off)	As low as possible

Since it is assumed here that LSDI theatrical presentation venues are generally darkened, the minimum screen luminance on image peak whites assumed for them is lower than the value that ISO 12608-1996 specifies for evaluating telecine transfers on a television display, but no lower than one half of that value.