RECOMMENDATION ITU-R BT.1846

**Notations for video systems**

(2008)

**Scope**

This Recommendation specifies the notations to be used to indicate video systems by means of their scanning characteristics, and when indicating their digital signal levels and code words.

The ITU Radiocommunication Assembly,

*considering*

a)      that the notations used to denote video systems are not always harmonized across the various Recommendations that address those systems;

b)      that it would be desirable to use a single notation for each video system, across all Recommendations;

c)      that a study of the Recommendations that use notations to refer to the various video systems has identified several valuable elements of convergence,

*recommends*

**1**      that a single notation should be used for each video system in all Recommendations that address that system;

**2**      that the notation should be the one detailed in Annex 1;

**3**      that whenever a Recommendation requires revision, and it uses a notation to refer to a video system, its notation should be aligned with the notations contained in Annex 1.

# Annex 1

## Notations to be used for video systems

As a general rule, the following notations should be used for video systems:

## 1      Spatial characteristics

When a video system is identified by its two-dimensional characteristics, the number of active pixels per line should be followed by the number of active lines per frame with the delimiter "$\times$" (e.g. $1\,920 \times 1\,080$).

When a video system is identified by using a one-dimensional characteristic, either the number of active lines per frame or the number of total lines per frame should be. The former is preferred for digital systems.

## 2        Temporal characteristics

The temporal resolution of a video system should be identified by the frame frequency for progressive-scanning systems, and by the field frequency for interlaced systems.

The type of scanning should be indicated by the symbol P, I, or PsF[1] that follows the temporal resolution and is separated from it by the delimiter "/" (e.g. 50/I, 59.94/P and 30/PsF).

Interlace ratios (2:1 or 1:1) may be indicated in some cases, but the use of the symbols above is preferred.

When a video system is identified by both its spatial and temporal characteristics, the spatial characteristics should be followed by the temporal characteristics with the delimiter "/" (e.g. 1 920 × 1 080/50/I and 1 080/30/PsF).

## 3        Aspect ratio

The picture aspect ratio should be identified by the ratio of the horizontal to the vertical image dimensions, with the delimiter ":".

## 4        Video signal levels

As a general rule, video signal levels should be indicated by the integer decimal notation. This should preferably be completed by a suffix (subscript in parentheses) indicating the bit depth (e.g. $0_{(8)} - 255_{(8)}$ for 8-bit systems and $0_{(10)} - 1\ 023_{(10)}$ for 10-bit systems).

## 5        Representation of code words

Code words should preferably be represented using the hexadecimal notation, however, when it is necessary to indicate the relationship between code words of different bit depths, the fractional representation should preferably be used.

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[1] PsF (progressive segmented frame) is progressively captured and its temporal resolution should be identified by the frame frequency.