ITU announces its new standard for High Dynamic Range TV.

ITU's Radiocommunication Sector (ITU-R) developed the standard in collaboration with experts from the television industry, broadcasting organizations and regulatory institutions in its Study Group 6.

"High Dynamic Range Television will bring a whole new viewing experience to audiences around the world," says ITU Secretary-General Houlin Zhao, welcoming the announcement. "TV programming will be enhanced with brighter pictures that add sparkle to entertainment and realism to news coverage."

"High Dynamic Range Television represents an important step towards the virtual-reality quality of experience to be delivered by future broadcasting and multimedia systems," notes François Rancy, Director of the ITU Radiocommunication Bureau.

This latest ITU-R HDR-TV Recommendation BT.2100 allows TV programmes to take full advantage of the new and much brighter display technologies. HDR-TV can make outdoor sunlit scenes appear brighter and more natural, adding highlights and sparkle. It enhances dimly lit interior and night scenes, revealing more detail in darker areas, giving TV producers the ability to reveal texture and subtle colours that are usually lost with existing Standard Dynamic Range TV.

The HDR-TV Recommendation details two options for producing High Dynamic Range TV images. The Perceptual Quantization (PQ) specification achieves a very wide range of brightness levels using a transfer function that is finely tuned to match the human visual system and the Hybrid Log-Gamma (HLG) specification which offers a degree of compatibility with legacy displays by more closely matching the previously established television transfer curves. The Recommendation also outlines a simple conversion process between the two HDR-TV options.

The ITU-R Recommendation BT.2100 also allows TV producers to choose from three levels of detail or resolution: HDTV (1920 by 1080), and UHDTV '4K' (3840 by 2160) and '8K' (7680 by 4320) – all of which use the progressive imaging system with extended colour gamut and range of frame-rates in ITU's UHDTV Recommendation BT.2020.

Go ITU-R Recommendation BT.2100