

Vividteq

Delivering HDR-like experiences on legacy TVs

Even though next-generation TVs and broadcasts feature High Dynamic Range (HDR) capabilities as standard, HDR has gained limited traction until now.

Furthermore, HDR-enabled Ultra HD broadcasts will not be widely rolled out over cable, terrestrial or satellite networks anytime soon due to system compatibility and infrastructure investment limitations.

Vividteq is a colour filter technology that enables pay TV and OTTtv providers to offer HDR-type experience on legacy TVs without needing a CPE (consumer premises equipment) upgrade.



Vividteq (on the right) boosts colour and contrast for a crisper HDR-like look.

How it works

Vividteq extracts live video feeds directly from the broadcast head-end or Content Delivery Network (CDN) and processes the captured data in real-time by deconstructing and reconstructing the feed on a frame-by-frame basis to produce an enhanced feed, suitable for broadcast via terrestrial, cable, satellite or IPTV channels.

About Spectral Edge

Spectral Edge, based in Cambridge, UK, develops and licenses embedded IP for automatically enhancing photo and video content. Based on our patented image fusion algorithms, our IP products are designed for integration into smartphones, consumer electronics (CE) devices or content delivery networks, to produce more detailed, more beautiful and natural-looking images.

Key features

- HDR-like viewing experiences on legacy TVs
- Dynamically improves image quality in real-time
- Sharper, crisper images with greater colour contrast and ranges
- Processes live TV or VoD in real-time, frame-by-frame

Technical facts

- Available as licenced IP for use in a broadcast head-end or CDN
- Requires a GPGPU or compute capable GPU

Integration requirements

- 10-bit YCbCr BT.709 input video format — readily adaptable to 8-bit content

Performance

- ~8ms per frame at 1080p
- Running on NVIDIA Tegra K1 SoC (NVIDIA Jetson TK1, NVIDIA Android Shield TV)
- GPU accelerated and implemented in CUDA

Supports alternative configurations and integrations — (e.g. Open CL/GL or C++ for X86) contact us to discuss requirements.