

# Dolby unveils technology to improve TV brightness

January 6 2014, by Ryan Nakashima

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Dolby, long known for pristine sound, is now trying to improve what you see. On Monday, at the International CES gadget show, the company unveiled Dolby Vision, a technology that increases the brightness and contrast of TV sets. Prototype models will be on display from TV manufacturers such as Sharp and TCL.

Standard TV sets emit about 100 nits—a unit of brightness roughly equivalent to one candle per square meter. As a reference, a 100-watt lightbulb emits 18,000 nits. Dolby says its prototype monitor can put out 4,000 nits.

San Francisco-based Dolby Laboratories Inc. says the brightness isn't blinding because only the brightest parts of an image are rendered that way. Increasing the contrast of these images helps bring out more subtle color variations and richer details, Dolby says.

The company says it expects TVs featuring Dolby Vision to be available for purchase later in 2014.

Part of Dolby's solution is improving the signal that gets sent to TVs in the first place. Dolby says it is working with several video streaming partners including Microsoft's Xbox Video, Amazon Instant Video, Netflix and Vudu. Video streams using Dolby Vision will use 12 bits of data per pixel, up from today's standard 8 bits.

The higher data rate means more of what is captured by filmmakers in

high-end digital cameras will end up on screen, even for sets not upgraded to handle the load, said Dolby's senior director of broadcast imaging, Roland Vlaicu. Software can trim the higher bit count for older sets.

"A lot of information is lost in the TV signals we have today," Vlaicu said.

Increasing the bit rate also raises the bandwidth required to handle the stream.

While there are physical limitations on the brightness of mass-production TV sets, viewers who tested the system preferred images rendered as bright as 10,000 nits, the limit of what Dolby Vision will support, Vlaicu said.

Consumer televisions in the near future will be able to emit 2,000 nits of brightness while remaining in line with Energy Star low-power requirements, he said.

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