For expanded coverage of this month's topic on "New Technologies and Techniques," you can find the following articles in the Digital Edition. Visit the SMPTE digital library at http://journal.smpte.org to access the issue and to read these additional papers.

Single-Sensor Video Cameras and the TLCI-2012

By Per Bøhler, Alan Roberts, and Odd Erling Høgberg

Reliable measurements of multiple single-sensor color filter array video cameras have recently been obtained. These can be used to augment the Television Lighting Consistency Index Q_a (European Broadcasting Union Recommendation R-137 TLCI-2012) and the Standard Camera Model, which were mainly based on modern broadcast HDTV cameras with three-sensor technology. During the development of TLCI-2012, an interest in single-sensor cameras was noted, but reliable measurements were difficult and only one example was available under NDA from the manufacturer. The findings from the new measurements are presented in this paper.

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Cost Increase Due to UHD Video Broadcasting Compared to HD

By Urvashi Pal and Horace L. King

It is well known that the television industry has been working passionately to bring ultrahigh-definition (UHD) video content to the viewer's home. 4K production cameras, broadcast equipment, and television sets are ready to go, but the actual transmission of the UHD content is yet to begin due to transmission cost constraints. Therefore, in this paper, the cost increase due to UHD video transmission is compared to HD, using signal quality parameters, in a Rician Fading Channel. Results show that the increase in cost for UHD video transmission is negligible when transmitted through 8PSK but is significant for QPSK.