

EXCLUSIVE ARTICLE ONLINE: ABSTRACT

For expanded coverage of this month's topic "Evolving Distribution," you can find the following paper in the Digital Edition. Visit the SMPTE digital library at <http://journal.smpte.org> to access the issue and to read this additional paper.

A Subjective Comparison of Broadcast and Unicast Transmission Impairments

By Brahim Allan, Mike Nilsson, and Ian Kegel

This paper describes a subjective test performed with 60 viewers over the age of 18 years and 570 young students, the majority being 10 or 11 years old, to understand the relative annoyance caused by various transmission impairments when viewing television content. Our goal

was to compare errors associated with broadcast and multicast delivery, which appear as areas of extreme color or tearing of the image, with errors associated with adaptive bit rate unicast, such as interruptions and quality variations. We also wanted to study the impact of the type of screen the content is viewed on, considering viewing on tablets and on a TV. A significant level of consistency was found over all of the results collected. Interruptions were the most annoying impairment, with multiple short interruptions being more annoying than a single longer one, and with missing content being more annoying than simply pausing. We found more tolerance to quality variation on tablets and found that younger adults are more annoyed by impairments on tablets and older adults are more annoyed when watching on the TV. We found the young students to have similar views to the adults and found them to be capable of participating in subjective tests.

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