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## **Display Technology: Disruptive changes for post**

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The CRT monitor, a staple of post houses worldwide since the early days of television, will soon go the way of the Movieola and the linear tape editor. Spurred by economic and environmental concerns, CRT manufacturers have abandoned the production of tube displays in favor of LCDs and other digital devices. It's only a matter of time before CRTs disappear entirely from editing bays, telecine suites and control rooms.

As with other entrenched technologies, some people are lamenting the CRT's loss. They are comfortable with their big, boxy tube displays and a suspicious of the flat, digital upstarts that seek to replace them. They don't want this change.

Perhaps they ought to take another look at LCDs. We are in an era of constant, disruptive change in display technologies. Evolutionary improvements are being made to LCD, plasma, DLP and DILA systems, while new technologies such as SED or FED offer hope for the future. Some of the new technologies may never see the light of day due to market economies driven by consumer electronics. It appears, however, that LCD technology is here to stay and with trillions of dollars invested in LCD fabrication systems, it is unlikely that an alternative technology will rival the economic scale of LCD technology, at least not in the next decade.

Today's LCD systems have come a long way from the digital display devices that were available just a few years back. Image quality has improved dramatically. Issues that have caused LCDs to be considered inferior to CRTs have begun to fade away. Color gamut, high dynamic range contrast ratios, black level reproduction, and motion processing are getting better with every new generation. The ability to calibrate an LCD system and have it remain stable over time already outperforms CRT technology. LCDs are also much more responsive in showing digital artifacts that are masked by the high frequency roll-off that occurs in CRTs.

Current LCD based display systems already perform tasks far beyond what any CRT product provided, evolving into image processing systems that help to support, speed up and improve digital workflows. Sophisticated LCD systems can now be used to perform such tasks as quantitative video analysis, color pre-visualization and video signal quality

assurance. In doing so, they can speed up dailies processing, editing and color grading. With built-in networking and web based remote functionality, they can also support real-time collaboration between production and post production. LCDs are quickly becoming a crucial link in an emerging digital workflow that stretches from acquisition through each phase of post. That is a role that no CRT monitor could fulfill.

CRTs have played a valuable role in post production for a long time, but that time has past. New technology has arrived. While some may continue to feel a fondness for their old CRTs, they have no reason to feel apprehensive of this change. It's a change worth celebrating.