

Session 18: Active-Matrix Devices

LCD TV

Wednesday, May 23 / 9:00 – 10:20 am / Ballroom A

Chair:

John Zhong, *Apple Computer, Cupertino, CA, U.S.A*

Co-Chair:

Willem den Boer, *ScanVue Technologies LLC, Brighton, MI, U.S.A.*

**18.1: Distinguished Paper: Novel TFT-LCD Technology (9:00)
for Motion-Blur Reduction Using 120-Hz Driving with
Motion-Compensated Frame Interpolation (McFi)**

*S-S. Kim, N-D. Kim, B. Berkeley, B-H. You, H. Nam,
J-H. Park, J. Lee
Samsung Electronics Co., Ltd., Chungcheongnam-do, Korea*

A 70-in. full-HD product, which on a commercial basis is the world's largest thus far, has been launched. Features include a brightness of 600 nits, dynamic control using LED local dimming, a contrast ratio of 100,000:1, a color gamut of 105%, and the world's first full-HD (1920 × 1080) product driven by a 120-Hz high-speed frame rate.

18.2: MVA-LCD with Low Color Shift and High Image Quality (9:20)

*M-C. Tai, M-H. Chang, C-C. Liu, Y-P. Chang, M-T. Wang
Chunghwa Picture Tubes Ltd., Taoyuan, Taiwan, ROC*

To create a suitable design for capacitance-coupling MVA-LCDs, the optimal ratio between coupling and pixel capacitance needs to be determined. The u'v' change was improved from 0.03 to 0.01. A zigzagged interlaced ITO diminishes image artifacts and image sticking.

18.3: Additional Refresh Technology (ART) of Advanced-MVA (AMVA) Mode for High-Quality LCDs (9:40)

*Y-P. Huang
National Chiao Tung University, Hsinchu, Taiwan, ROC*

*W-K. Huang, C-H. Tsao, J-J. Su, H-L. Hou,
L. Liao, C-Y. Lee, T-R. Chang, Y-C. Lin, P-L. Chen
AU Optronics Corp., Hsinchu, Taiwan, ROC*

Additional refresh technology (ART), which demonstrates the features of low color washout and fast response speed by modifying only the pixel layout while maintaining the cost benefits, will be discussed. The method was implemented in advanced-MVA (AMVA) mode TFT-LCDs.

18.4: Novel Gamma-Correction Method Using an Advanced Capacitive Coupling Driving (10:00)

*T. Tsunashima, J. Kimura, T. Kawamura, Y. Aoki, T. Motai,
K. Takahashi, T. Kanuma, A. Ishida, H. Nakamura
Toshiba Matsushita Display Technology Co., Ltd., Saitama,
Japan*

An LCD panel has been developed by adjusting each RGB gamma characteristic independently without increasing the scale of the peripheral circuit. It was accomplished by using a capacitive-coupling driving method and optimizing the storage capacitances of the R, G, and B pixels independently.

BREAK (10:20–10:40)

AUTHOR INTERVIEWS (6:30–7:30)