

**Flat Panel Display Strategic Forum
and Technical Symposium
"Globalization of the Display Industry"
September 22 & 23, 1997**

- 7:00-8:00 Registration and Continental Breakfast
- 8:00-8:05 Welcome and Introduction: Samuel Musa, Executive Director,
Center for Display Technology and Manufacturing
- 8:05-8:10 Opening Remarks: Stephen Director, Dean, University of Michigan,
College of Engineering
- 8:10-8:40 Keynote Address: Doug Rothwell, CEO, Michigan Jobs Commission

**SESSION I: Next Generation Display Manufacturing:
Challenges and Opportunities**

Session Chair: Samuel Musa

- 8:40-9:10 Ross Young, President, DisplaySearch
- 9:10-9:40 Hideaki Kawakami, Senior Chief Engineer, Hitachi
- 9:40-10:10 Hiroshi Hayama, Research Manager, NEC Corporation
- 10:10-10:30 Break
- 10:30-11:00 Todd Yuzuriha, Director of LCD Technology R&D,
Sharp Microelectronics Technology, Inc.
- 11:00-11:30 Donggil Kim, Vice President, Frontec, Inc.
- 11:30-1:00 Lunch

SESSION II: U.S. Display Industry : Manufacturing and Infrastructure

Session Chair: Rex Tapp

- 1:00-1:30 Michael Ciesinski, Chief Executive Officer, United State Display Consortium
Manufacturing
- 1:30-2:00 Thomas L. Credelle, Director, Product Marketing, Flat Panel Display Division, Motorola
- 2:00-2:30 Steven Depp, Director, Subsystem Technologies and Applications Lab, IBM
- 2:30-2:50 Break
- Infrastructure**
- 2:50-3:20 Norman L. Turner, Vice President, Product Operation, Applied Komatsu Technology
- 3:20-3:50 Peter Bocko, Manager, Applications, Development, Advanced Display Products, Corning
- 3:50-4:20 Stefanie Ann Lenway, Professor, University of Minnesota
- Thomas P. Murtha, Associate Professor, University of Minnesota
- 4:20-4:50 **Panel of Session II Speakers**
- 5:00 Busses to Electronics Manufacturing Laboratory
- 5:30-6:30 IAB Meeting - EML Conference Room
- 5:30-7:30 **Tour and Reception** University of Michigan,
Center for Display Technology and Manufacturing,
Electronics Manufacturing Laboratory

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- 7:00-8:00 Continental Breakfast

SESSION III: Future Directions in Vehicle Displays

Session Chair: David Cole

- 8:00-8:30 Gary Dickinson, Retired CEO, Delco
- 8:30-9:00 Bill Powers, Vice President for Research, Ford
- 9:00-9:30 Norimasa Kishi, Senior Researcher, Electronic and Information Systems Research Laboratory,
Nissan
- 9:30-10:00 Break

SESSION IV: Civilian Vehicle Displays

Session Co-Chairs: **Bob Donofrio and Jim Erskine**

- 10:00-10:20 "Comparison of VFDs and FEDs", Chris Slupek, Futaba
10:20-10:40 "9600 ftL Active Matrix Vacuum Fluorescent Display with Integrated Driver Circuitry", John Troxell, et al., General Motors, Delco & Futaba
10:40-11:00 "Human Factors for Automotive Applications of EL Displays", Hollister Hartman, United Technologies Automotive
11:00-11:20 "A New Rugged Substrate Material for Integrated High-Performance Automotive Displays", David Staebler, Sarnoff
11:20-5:00 Posters Displayed
11:20-12:30 Lunch
12:30-1:20 Posters manned and networking

SESSION V: Military Vehicle Displays

Session Co-Chairs: **R. Shashidhar and Rick Wyrembelski**

- 1:30-1:50 "New Displays for the Abrams M1 Tank", Terry Hatton, General Dynamics Land Systems
1:50-2:10 "Integration of a Flat Panel Display in the M1A2 Main Battle Tank: A Human Factors Challenge", Wendy Staiger, General Dynamics Land Systems
2:10-2:30 "TM-600 Monitor for Vehicle Applications", Arthur Mengel, Teltron Technologies
2:30-2:50 "Gray Level Separation for Vehicle AMLCDs", Matthew Warmuth, Optical Imaging Systems
2:50-3:10 Break

SESSION VI: Emerging Technology

Session Co-Chairs: **Steven Depp and Vincent Cannella**

- 3:10-3:30 "Light Emitting Diode Displays", David J. Williams, Eastman Kodak
3:30-3:50 "CMOS Displays", J. Fan, Kopin
3:50-4:10 "Reflective LCD Displays", Philip Bos, Kent State University
4:10-4:30 "X-Ray Imaging Using Display Related Technology", John McGill, Optical Imaging Systems

SESSION VII: Poster Session

Session Chair: **Alan Sobel**

- P-1 "Liquid Crystal Materials for Electrically Controllable Birefringence Effects", V. V. Belyaev, Central R&D Institute Cometa, Russia
P-2 "Color Displays in the Main Battle Tanks", Jennifer Gross, General Dynamics Land Systems
P-3 "Development of a System for the Production of Ionized Water by Electrolysis and Evaluation of the Cleaning Efficiency of the Ionized Water", Naoya Hayamizu, Toshiba & Permelec Electrode Ltd.
P-4 "Accurate Color Measurements in Vehicle Displays", Hector Lara, Photo Research.
P-5 "Striped Texture in Polymer Networks Stabilized Ferroelectric Liquid Crystal Devices", JianJun Li, Changchun Institute of Physics, China
P-6 "Electro-optical and Viewing Angle Performance of Low-delta n Liquid Crystal Displays", Z. Y. Liang, North LCD Center, Changchun Institute of Physics, China
P-7 "Motheye Surface Relief Structures as Alternative to AR Coatings" James Nole, Holographic Lithography Systems
P-8 "A Novel Device for Reflective or Transparent Type Displays", Hongwen Ren, Liquid Crystal Lab, Changchun Institute of Physics, China
P-9 "Optimized Driving Scheme for STN Display Panel in Portable Application", Lighten Tse, Motorola
P-10 "Simultaneous Scan Dual MIM-AMLCDs Using Si-rich SiN_x", V. Veerasamy, Optical Imaging Systems
P-11 "Microstructure Control for Thin Film Metallization", G. S. Was, University of Michigan
P-12 "Fabrication and Optimization of Diamond Field Emission Display Cell in Triode Mode", D. Hong, Michigan State University
P-13 "E-Beam Evaporated Indium Tin Oxide Films on Plastics for Display Applications", Dondal J. Davis, Kent Displays, Inc. and Gerald T. Mearini, General Vacuum, Inc.