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## Stanford Resources Releases Report on Flat Panel Display Industry

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# Market NEWS

## Stanford Resources Releases Report on Flat Panel Display Industry

**S**tanford Resources Inc., the leading market research firm specializing in the global electronic display industry, has released its annual study on the flat panel display (FPD) industry - *Flat Information Displays*. Now in its eighth edition, this industry perspective analyses competing FPD technologies in terms of technological development, sales, suppliers and future prospects.

Dr Joseph Castellano, president of Stanford Resources, explained that with technology moving at such a rapid pace, those involved in the marketing of display products are faced with the challenge of maintaining a competitive edge. 'Managers need to segment the market, position their product and differentiate their company from the competitors,' he said. 'This edition of *Flat Information Displays* provides information that is particularly important to the marketing professional, researcher or strategic planner and delivers vital information to accomplish these tasks.'

According to Stanford Resources, liquid crystal displays (LCDs) and plasma display panels (PDPs) are at the threshold of penetrating the stationary display applications market, traditionally dominated by cathode ray tube (CRT) displays. LCDs continue to be revenue leaders in the FPD market and will challenge the CRT-based PC and workstation monitor market with a variety of sizes from 12 inches to 40 inches. Colour PDPs will challenge the market by delivering CRT-like performance in several screen sizes. Currently, 26, 42, 55 and 70 inch screens are being developed for use in television sets. Also, in the near future, the FPD market will see the emergence of field emission display (FED) products, often referred to as 'flat' or 'thin' CRTs because of their technological similarities to the CRT. Currently, several manufacturers are

developing prototypes for the notebook computer market.

The market analysis in the report includes forecasts through 2003 and provides tabulated data on unit shipments, value of shipments and average selling price for all application categories including LCDs, FEDs, plasma displays and electroluminescent displays. A detailed database in the appendix provides actual and forecast data for each technology, region and product application. Newly added applications include digital still cameras and auto navigation products.

A digest of the latest Stanford Resources Report reveals the following:

● **Worldwide market consumption of graphic flat panel displays:**

In 1997, graphic and segmented/character flat panel display sales will reach \$14.2 billion. Projected sales for the year 2000 are \$21.8 billion and \$28.8 billion by 2003.

● **Technology trends:**

**TFT-LCDs**

In 1997, TFT-LCDs will account for 72% of revenue and 43% of unit sales in the graphic FPD market. In 2003, the market share will increase to 75% of revenue and unit sales will increase to 55%.

**PDPs**

In 1997, PDP sales will be \$325 million. Projected sales for the year 2003 are \$2.3 billion.

● **Application trends:**

**Computers**

Display sales for computer equipment account for two-thirds of the FPD market revenue. At 15% average annual sales growth the computer segment will experience the second highest growth rate.

**Colour televisions**

In the year 2003, direct-view and projection TVs will contribute \$2.6 billion to the graphic FPD market.

**Desktop monitors**

Displays for desktop monitors will grow to 18 million units in the year 2003.

**Portable computers**

In the year 2003, flat panels used in portable computers will be valued at \$10.3 billion.

For further information contact: **Tim Carli, Stanford Resources**  
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**The British Liquid Crystal Society's annual meeting is held just before Easter every year. This year it was the turn of Southampton to host the 12th annual meeting, and is the first time that the society has met in Southampton since its inaugural meeting, so long ago that this writer cannot even remember when. The meeting came only two months after the opening of the Southampton Liquid Crystal Institute and Director Professor Harry Coles did not miss the opportunity for some free publicity.**

The meeting hosted five invited speakers, twenty one contributed talks and no less than sixty three posters. There were over 150 delegates representing all the British academic groups involved in liquid crystal work, several industrial laboratories, and visitors from France, Germany, Spain, Italy, Switzerland, Portugal, and as far away as America and Japan. The conference was lucky to obtain sponsorship from Taylor & Francis Scientific Publishers, Linkam Scientific Instruments, The Royal Society of Chemistry, and Sharp Laboratories of Europe.

The premier invited lecture was the

# Meeting Report

**British Liquid Crystal Society  
Annual Conference 1997**

*Report by Tim Sluckin,  
University of Southampton, UK*

society's annual Sturgeon Lecture, celebrating the work of the late Ben Sturgeon who pioneered liquid crystal research at BDH Ltd (now Merck UK). This year's Sturgeon lecturer was Professor Atsuo Fukuda (Tokyo Institute of Technology), current president of the International Liquid Crystal Society, whose talk was entitled 'Thresholdless antiferroelectricity, V-shaped switching and liquid crystal displays'. Other invited speakers were Professor Chuck Rosenblatt (Case Western Reserve University, Cleveland, Ohio, USA), who talked on 'Exotic behaviour in anti-ferroelectric liquid crystals', Professor Claudio Zannoni (University of Bologna), who gave an overview of recent work on computer simulation of liquid crystals,

and Professor John Goodby (Hull), speaking about the role of liquid crystals in living organisms.

The Society's prestigious Young Scientist prize was awarded to Dr Diana Ulrich (Sharp Laboratories of Europe) for her PhD work, carried out at Oxford University under the supervision of Dr Steve Elston. Her prize-winning talk, entitled 'Domain formation and switching in ferroelectric liquid crystal devices', was extremely well received.

The social high point of the meeting was the Conference Dinner. During good food, fine wine and convivial company, the George Gray medal was awarded to Professor Frank Leslie (Strathclyde University), for his services to the theory of liquid crystals. Professor Leslie gave an amusing speech clad in beautiful tartans, and the audience, by this time rather the worse for wear, counted the viscosity coefficients in the wine. The guest of honour was John Denham, a former student of Professor Geoffrey Luckhurst, and Member of Parliament for one of the Southampton constituencies. British colleagues and others look forward to next year's meeting, which will be organised by Dr Alastair Smith at Leeds University.