

Free Student Membership

Currently, Student Membership of the UK & Ireland Chapter is free for all full-time students who are registered for a degree in the UK & Ireland. Benefits include receiving SID Journal and Information Display Magazine as well as receiving information on local and international SID meetings and conferences. Student members are eligible for student rates at all SID meetings and conferences.

Application forms are available on the chapter web site. Details can also be obtained from the Membership Secretary, Pat Crofts.

UK Web site

The SID UK Chapter web site is now run in conjunction with the main SID web site. The Chapter home page is at www.sid.org/chapters/uki.html. Don't forget to check the web site for up-to-date news of forthcoming meetings.

A meeting is being planned for 18 October 2006 and the AGM and technical programme have been scheduled for 25 April 2007 at Sharp Laboratories of Europe in Oxford. Details of the meetings will be circulated to members and posted on the chapter web site in due course.



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NEW

An imaginary

Grant

CONFERENCE PROGRAMME

Date	Conference	Contact
22-25 Aug 2006	6 th International Meeting on Information Display (IMID 2006) and International Display Manufacturing Conference (IDMC 2006), Daegu, Korea	www.sid.org
18-21 Sep 2006	International Display Research Conference (IDRC), Kent State University, Ohio	www.sid.org
19 Sep 2006	Special one-day meeting on Flexoelectricity in Liquid Crystals, Oxford	www.g.eng.cam.ac.uk/photronics/blcs
8-12 Oct 2006	Asian Symposium on Information Display (ASID), New Dehli, India	www.sid.org
18 Oct 2006	Provisional Information - one-day meeting on Displays & Lighting	www.sid.org/chapters/uki.html
6 Dec 2007	13 th International Display Workshops (IDW 06'), Olsu, Japan	www.sid.org
25 Apr 2007	UK Chapter and one-day meeting, Sharp Laboratories of Europe, Oxford	www.sid.org/chapters/uki.html
26-28 Mar 2007	BLCS Annual Meeting, University of Sheffield, Sheffield	www.g.eng.cam.ac.uk/photronics/blcs
20-25 May 2007	SID 2007, Long Beach, California, USA Call for papers	www.sid.org

CONTACT INFORMATION

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Beep, beep, beep...the noise wakes me. I and look at the dye-doped liquid crystal alarm clock. I can't believe it's that time of the morning. In a state of emergency contingency, I hit the snooze button but force myself out of bed before the reminder. Although it's early, I can't hear the noise of the CRT television downstairs. The alarm means the children are awake, active, but preoccupied. I'm yet dressed for school. Rather than facing the day, I turn my head to the shower and consider the day ahead. The most important item is a video conference with my colleagues in Japan, due to start in three hours. I use the time on my own to consider the main discussion points.

After showering, I slip on my new Seiko e-ink watch. The contrast and viewability outdoors is very good. I wonder whether to purchase the new Sony e-ink electronic book reader but decide to wait since I haven't yet told my wife the cost of the watch and the e-book will only compound that issue. I also want to look at the e-book content availability prior to any purchase.

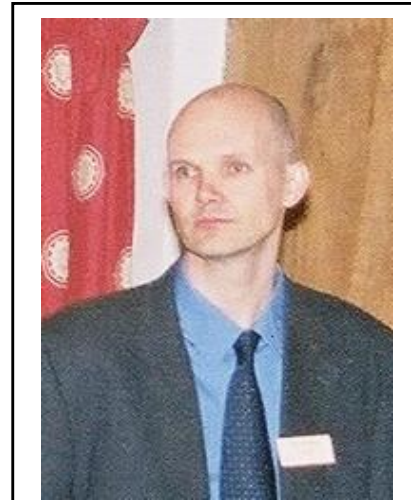
While making breakfast, I use the broadband connection and 12" active matrix XGA screen to find out the train situation in my hometown. For once, something

FLEXIBLE DISPLAYS & ELECTRONICS

First day of meeting at Knebworth Park, 5 April 2006

Report by Graham Weaver

Following on from the Chapter's AGM, the first presentation was 'Design of liquid-crystal semiconductors and their application in organic electronics' by Iain McCulloch from Merck. Iain described the molecular design principals that had been utilised to identify new, air-stable, high-performing charge-transport materials for OFET semiconductors. He predicted that organic semiconductors will be the enabling materials in many high-volume, rapidly-growing applications, offering lower costs and processing flexibility. Iain's presentation was subsequently voted the best paper presented at the meeting.



Iain McCulloch

This was followed by a presentation on 'Options for passive matrix plastic LCDs' by Guy Bryan-Brown from ZBD Displays. After reviewing a number of different plastic passive display modes, Guy described the ZBD bistable surface technology and the plastic ZBD prototype display, which has been developed. The technology can be made today with a PES substrate, using batch processing, with a cost of twice that of a glass-substrate display.

Klaus Ludwig from PolyIC, a joint venture between Siemens and Leonard Kurz, gave the next presentation on 'Printed electronics and display applications'. Klaus described several products that PolyIC have developed: polymer field-effect transistor, ring oscillator with 600 kHz frequency and a polymer rectifier. He pointed out the demands on polymer electronic printing and the innovations needed for new products. He drew delegates' attention to a new



Klaus Ludwig

RFID tag,



After highlighting the key requirements for a viable backplane manufacturing process - low cost, large area, device performance meets mechanical and electrical stability and application requirements, Seamus described how Plastic Logic had met these requirements, with a capability of initially 100 ppi, increasing to 300 ppi and an initial A5 active area increasing to A4, bend radius of <0.5 cm and grey scale capability.

With a change of focus, Stewart Collie, from Canesis Ld gave a paper on 'Conductive textiles as a route to flexible electronics'. Stewart described some applications for 'smart' textiles, including textile integrated heating systems, electroluminescent textiles and conductive fabrics for sensor applications. Canesis has established a subsidiary, Softswitch Ltd, which develops, manufactures and markets products with electronic switching and pressure sensing integrated into textiles.

David Sikharulidze, from HP Labs, then gave a presentation on 'Electrophoretically controlled nematic LCDs', which employ a mixture of nematic LC with solid nanoparticles. The addition of the nanoparticles results in polarity-controlled bistable/multistable switching. EPCN enables conventional LCD technology to create passive matrix addressed displays with unlimited number of pixels, high resolution and contrast, including low-cost large-scale flexible displays.

The next presentation was 'Flexible substrates for displays' by Dave Wall, from

BEN

Winners 2006

The Ben Sturgeon Award for 2006 has been presented to Grant Bourhill, Diana Kean, Jonathan and Heather Stevenson of Sharp Laboratories. The award was presented to them at the Chapter meeting on 5 April 2006 by Ian Sage, the retiring U.K. Chair.

Sharp were approached by a luxury car manufacturer who wanted to produce an entertainment display for front-seat passengers which could not be viewed by the driver. The main challenge is that there is no room for forbidding any moving-image display that could be viewed by the driver while the vehicle is moving.

Grant Bourhill and his team invented a solution. The display was based on the Sharp 3D technology, but the dual-view display is considerably more compact. Instead of a stereo pair, the display produces two separate images. One of these could be a movie scene, the other an entertainment scene.

Because the images are separate, there are no stringent requirements for crosstalk to prevent ghosting from occurring. In addition, the images must be seen from a wide angle to ensure that the driver cannot see the other screen and it must not be possible for passengers to see a mixed view. During the development of the work, the team solved all these problems. The team also filed no less than 25 patents to protect their technology.

Conti. from P 1. An imaginary day in the

I am now on the train and heading towards Oxford. The train is full as usual for this time of day. I am thinking about the video conference. I am really tempted to look at files on my laptop related to the meeting but I am reluctant since many of the discussions were confidential. I remember that Toshiba had recently released an electronically switchable privacy filter for laptops. The technology allows a user to select the viewing angle of the LCD screen has a wide or narrow viewing angle. I am now on the train and heading towards Oxford.