Tech Seminar

HP reveals the science of original printing solutions

The Science of Printing: Day 1

NAFID IMRAN AHMED, *back from Singapore*

CLICKING the 'Print' button does get your desired printout from the printer but doesn't tell us much about the science involved in the printing and the mystified interaction of the ink and the paper. Hewlett-Packard (HP) has taken up a proactive movement to educate its clients about the science of printing involved in original printing solutions given the proliferation of alternative solutions in the Asia Pacific region.

To send the message of quality and reliability about the HP's cartridge and ink technology, a two day-long seminar with regional journalists on 'The Science of Printing' was held at the Inkjet Supplies Manufacturing Singapore (IJMS) facility on March 4 -5. At the seminar, senior officials, scientists and technical persons of the company demonstrated HP's technologies behind its printing system which includes the printer, ink, cartridges and media-like paper.

only 4 percent digital printing takes pace in the vast world of printing of images, magazine, newspapers, packaging, books, brochures, catalogues, forms, fax and copies. But this number is increasing rapidly and HP has a major role to play there. "Within the next two years HP will introduce products unique the market

printing system, requiring sophisticated technologies," he said.

Vincent also said the printing and imaging market is highly competitive, with some companies offering alternative solutions like refills for ink. But while recognising the competition, HP has a different value proposition to its

professional-quality black and white photos that resist noticeable light fading for 115 years. Referring to a test report by Wilhelm Imaging Research Inc (WIR), a leading worldwide image permanence laboratory, Nils said black and white prints by HP Photosmart 7960 resist fading for up to 115 years when tested under

fair and credible comparisons," he added. WIR tests previously concluded that HP's latest colour photo printing systems offer fade resistance under display conditions for 73 years.

The print head of HP ink cartridges has up to 500 nozzles, each finer than a human hair. Heated ink in the form of tiny vapour

experiment 'black-to-colour bleed' performed by all the seminar participants. The experiment showed how HP's ink formulation includes a patented chemical mechanism that controls 'black-to-colour bleed' on office papers.

Marco Li, product engineer director, IJMS operations, HP, then gave a detailed overview of

A site tour of the Inkjet Supplies Manufacturing Singapore (IJMS) facility next concluded the sessions on the first day of the 'Science of Printing.' The manufacturing plant involves state-of-the-art automated production lines and includes an in-house Wafer Fabrication plant.

The plant produces silicon

Nils Miller, ink/media senior scientist, HP, explains lightfastness

Vincent Vanderpoel, vice-president, Asia-Pacific speaking at the seminar

HP polymerized toner particles

An experiment shows how HP's ink controls 'black-to-colour bleed' on papers.

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In the Asia-Pacific region, printers constitute a large chunk of HP's business. The total printer business for HP is estimated at around \$22.9 billion over the last four quarters. HP shipped more than 300 million printers, most of which were inkjets. Sharing these figures, Michael Hoffmann, senior vice president, Imaging and Printer Group (IPG), HP, started the 'Science of Printing' presentation. He showed that

and try to make digital photography as easy as ever before." He added.

Vincent Vanderpoel, vice-president, supplies business, IPG, Asia-Pacific/Japan, spoke at length about the company's innovative initiatives and the high-end printers, cartridges and ink. "Supplies are not just ink, toner and paper. They are highly engineered components of a

clients who are free to make their choices.

Talking about the consumer benefit of the science of printing, Nils Miller, ink/media senior scientist, HP, described the image quality, reliability and specially 'lightfastness' of the inkjet printing technology.

He said HP's recently introduced black and white-capable photo printing systems offer

glass.

"Its important for customers to understand that any credible comparisons of photo performance must be delivered from identical test methods," said Nils. "WIR employs the most stringent and most widely used test methodology on fade resistance. In addition, Wilhelm tests and publishes results for all major brands, which enables customers to make

bubbles are ejected at a speed of 15 m/sec with over 7 million 5 pico-litrr drops delivered every second.

Venkat Balasubramaniam, ink chemist, HP, then demonstrated HP's ink formulation. He described the central ink ingredients, components, environmental impact, performance on paper, other media and printing system. He then assisted a lab

the designing, manufacturing and product-testing process. He demonstrated how HP uses the Drops Break-off Observation System (DBOS) and optimises Bore geometry to create the perfect inkjet models. He also spoke about the Hermetic seal testing, a helium leakage detection process and Automatic Print Quality Tester (APQT), which is done to measure nozzle health and drop placement.

wafers to meet inkjet manufacturing demands in Singapore, US, Puerto Rico and Ireland. The inkjet production began in Singapore in 1988. Over the years, IJMS has introduced more technologically advanced production lines. The MOS (Metal Oxide Semiconductor) integrated circuit wafer fabrication facility was set up in 2001.

Bot-led orchestra

PHOTO: AFP
Japanese electronics giant Sony's humanoid robot Qrio conducts an orchestra during a rehearsal of their concert of Beethoven's No.5 symphony held in Tokyo on March 9. Qrio and the Tokyo Philharmonia Orchestra will perform before an audience this weekend.

Tech Alert

RECENT research found that Asia is one of the most virus-threatened regions. In Bangladesh, most PC users are not protected with anti virus solutions because of the lack of knowledge and pirated software products that do not have the benefits of updating itself with the latest virus definitions.

A data on virus attacks in past 30 days shows that 24.85% of the viruses attacks took place in the Asia Pacific region, which is the third highest in the list of affected regions. PC users should deploy the latest version of antivirus guards to be on the safe side and stay updated. Here's a sneak-peak of some latest viruses.

W32.Beagle.C@mm

Discovery Date: 27/2/2004; Type: Virus; Sub Type: E-mail worm; Aliases: W32.Beagle.A@mm, W32/Bagle.c@MM [McAfee], WORM_BAGLE.C [Trend], W32/Bagle-C [Sophos]

This is a mass-mailing worm that opens a backdoor on TCP port 2745. The worm uses its own SMTP engine for email propagation. It attempts to terminate processes responsible for providing updates to various antivirus programs. The worm copies itself as %System%\readme.exe. It edits the HKEY so that the virus runs whenever you start windows.

Removal Instruction: 1. Reboot the system into Safe Mode (press F8 key as soon as the Starting Windows text is displayed after booting, then choose Safe Mode). 2. Delete the file following from your WINDOWS System directory (typically C:\Windows\System or C:\Winnt\System32) README.EXE; ÈDOC.EXE; ONDE.EXE; README.EXEOPEN. 3. Delete the "gouday.exe" value from:HKEY_CURRENT_USER\Software\Microsoft\Windows\Current Version\Run. 4. Delete the key HKEY_CURRENT_USER\Software\DateTime2. 5. Reboot the system into Default Mode

W32/Netsky.c@MM

Discovery Date: 25/2/2004; Type: Internet worm; Sub Type: E-mail worm; Aliases: I-Worm/Netsky.C (Grisoft), W32.Netsky.C@mm (NAV), W32/Netsky.C.worm (Panda)

This worm spreads by email and by copying itself to folders on the local hard drive as well as on mapped network drives if available.ÈThis virus spreads via email and mapped drives. ItÈsends itself to addresses found on the victim's machine and by copying itselfÈto folders on drives C: - Z:.

Removal Instructions: 1. Reboot the system into Safe Mode (hit the F8 key as soon as the Starting Windows text is displayed, choose Safe Mode). 2. Delete the file 'WINLOGON.EXE' from your WINDOWS directory (typically c:\windows or c:\winnt) NOTE: Do not delete the file WINLOGON.EXE from the WINDOWS SYSTEM directory as that is a valid Windows system file. 3. Delete the "ICQ Net" value from: HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\Current Version\Run & KEY_CURRENT_USERS\SOFTWARE\Microsoft\Windows\Current Version\Run. 4. Reboot the system into Default Mode

W32/Mydoom.f@MM

Discovery Date: 19/2/2004; Type: Virus; Sub Type: E-mail worm; Aliases: W32/Mydoom-F (Sophos), WORM_MYDOOM.F (Trend)

This is a mass-mailing andÈshare-hopping worm that has the following characteristics: 1. contains its own SMTP engine to construct outgoing messages; 2. contains ability to copy itself to mapped drives; 3. contains a backdoor component; 4. contains a Denial of Service payload; 5. contains payload of deleting files. The virus uses a DLL that it creates in the Windows System directory usingÈrandom file-names (Eg: %SYSDIR%\vppu.dll (8,068 bytes).

Removal Instructions: If you think that you may be infected with Mydoom, and are unsure how to check your system, you may download the Stinger tool from http://vil.nai.com/vil/stinger to scan your system and remove the virus if it is present.

W32/Nachi.worm

Discovery Date: 18/8/2003; Type: Virus; Sub Type: Internet Worm; Aliases: W32/Nachi!tftpd, W32/Nachi.worm.a

Irrespective of anti-virus detection, unless the system has been (MS03-026) patched, it is susceptible to the buffer overflow attack from an infected host machine. An infected machine will send packets across the local subnet to the RPC service running on port 135.

Removal Instructions: 1. Apply the MS03-039 patch (includes MS03-026 Èpatch); 2. Terminate the following services: (i) WINS Client; (ii) Network Connections Sharing; 3. Delete the DLLHOST.EXE and SVCHOST.EXE files from the WINS directory with your WINDOWS SYSTEM32 directory. 4. Edit the registry to: Delete the "RpcPatch"keyfrom: HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services; 5. Delete the "RpcTftpd" key from HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services.

BY SAAD BIN FAZLE HAMMADI

VIRUS ALARM

Best 10 Websites
Category: Boating & Marine

Southern Cross III
Luxury superyacht.
URL: http://www.southerncrossiii.com/

Image Marine
Art of aquatic opulence.
URL: http://www.imagemarine.com.au/

Boats.com
Boat brokerage, large selection of product listings, boat services & US marina links.
URL: http://www.boats.com/

Regal Boats
Among the best boatbuilders in the world - quality, high performance & style.
URL: http://www.regalboats.com/

YachtWorld
Largest photo database of boats for sale on the web, boat buying essentials, boating articles, library & forums.
URL: http://www.yachtworld.com/

iWaterways
Boat guide, boating superstore, resource center & communities for water lovers.
URL: http://www.iwaterways.com/

Project Boats
Build a boat, visit the boat shop or buy a submarine.
URL: http://www.projectboats.com/

Boat Design
Boat plans, design awards, boat design directory & project boats.
URL: http://www.boatdesign.net/

Fairline
Quality power boats & accessories.
URL: http://www.fairline.com/

Aboard
UK website for the leisure boating industry including boat market & large boating links index.
URL: http://www.aboard.co.uk/

Photo Tech

PHOTO: AFP
This handout photo released by MOSTiTECH on March 2, shows a household robot guardian that notifies its master via mobile phone of burglars, fires and gas leaks, displayed at the MOSTiTECH headquarters in Seoul. The robot, made by the Seoul-based start-up MOSTiTECH, is packed with a small camera, motion detectors and heat and gas sensors and can takes snap shots of anything that moves.

Tech News

Oracle highlights Linux for the year ahead

STAR TECH DESK

AGAINST a backdrop of strong customer momentum across key industries in 2003, Oracle Asia Pacific heads into the new year with compelling offerings in the strategic areas of grid technology, Linux and mid-market on February 4, says a press release. With Asia Pacific having recently been selected by global executives as the region offering their businesses the greatest growth opportunities over the next three years, these cost-effective and highly productive solutions are well positioned to be significant drivers for continued technology adoption in the year ahead.

"We are glad to see that our Asia Pacific performance in 2003 has shrugged off difficulties in the regional business earlier in the year to rebound with a vibrant contribution to Oracle's global performance," said Derek Williams, executive vice president for Oracle Corporation Asia Pacific Division. "The Oracle E-Business Suite and

Oracle infrastructure products have both seen excellent uptake from major corporations and institutions across industries in the region."

This endorsement of Oracle solutions sets the prognosis for healthy adoption in 2004 as the forecast resurgence in IT spending unfolds, especially in Asia Pacific. A recent research report from IDC dated December 15, 2003, highlights double-digit growth for the Asia Pacific IT market (excluding Japan) in 2004, particularly China and India. "The region's two largest developing economies China and India are charging forward on the economic front and driving overall regional IT market recovery," said Piyush Singh, Managing Director, IDC Asia Pacific.
Key Industry Sectors Show Enthusiastic Adoption
Many organisations in Asia Pacific adopted or expanded implementations of Oracle E-Business Suite, Oracle Database, Oracle Application Server, Oracle Collaboration Suite and Oracle Real Application Clus-

ters in 2003, particularly in the key industry sectors of government, financial services, telecommunications, manufacturing and distribution, and transport. While some customers chose to buy individual components of Oracle's portfolio of

products and services, others have taken advantage of Oracle's unique capabilities to increase performance and reduce costs through a completely integrated infrastructure.