The new CPU/GPU processor platforms–what change would there be for computing?

31/03/2011 04:55

Articles

Sony Unveils its new premium VAIO S Series laptops[1]

My comments about the new trend

Cost-effective system design

Due to the integration of the CPU and the graphics processor in the one chip, we will find that most computer systems will become cheaper to purchase. This will also mean that graphics performance for most multimedia and games activity will start to come at a cheaper price and be available in product classes that wouldn't otherwise have it like mainstream-priced computers and the subnotebook /ultraportable class of portable computer.

Dual-mode graphics

There will also be an increased use of dual-mode graphics technology as a product differentiator for midrange and high-end machines. This is where a computer is equipped with integrated graphics as well as a discrete graphics chipset and the computer uses integrated graphics for most tasks but uses the discrete graphics for video editing and intense gameplay.

This could be seen like the computer-graphics equivalent of the "overdrive" or "sports mode" switch used on some cars as a way of allowing the car to work in a performance-enhanced way. Here, the user benefits from reduced energy needs and reduced battery consumption when they use the integrated graphics but can use the discrete graphics chipset when they need the extra graphics performance.

Could this change the positioning and pricing of computers?

This may have some some effect on the prices for most of the mainstream computer ranges especially if the equipment in question is to be sold with "single-mode" graphics. Of course, the "dual-mode" graphics will still be pitched at the market who place heavy importance on graphics performance like line-of-profession imaging (CAD/CAM, graphic arts, medical imaging, etc) and "LAN-party" hardcore gamers and will still command the price premium. Here, the manufacturers can still work on performance-optimised discrete GPUs for this market and offer them in the "dual-mode" computers.

Some people may also reckon that the ability for computers based on these chipsets to perform to mainstream expectations for multimedia and gaming may allow people who value these functions to spend less on the equipment that they want. They can also place importance on "size and style" without sacrificing graphics performance.

It can therefore lead to ultra-compact computer types like 12"-14" subnotebook /ultraportable computers and small-form-factor desktop computers being offered with decent rather than second-rate graphics performance. This could, for example, make the subnotebook more appealing as a "travel workstation" for a photo journalist or other professional photographer to use when editing or previewing photographs and video footage in the field.

How to factor this in when buying a computer through this year

What I would reckon that you should do is determine what class of computer that suits your needs, including your minimum specifications for functionality. This includes hard disk capacity, RAM memory capacity, screen size, user interface, operating-system and other factors. Then look for the good deals where you can save money on the prospective computer purchase.

It may also affect the pricing and positioning of computers based on existing "separate-GPU" graphics technology especially as manufacturers move towards the new combined CPU/GPU technologies. Here, they will be wanting to clear the warehouses of these machines and you may find that the deals are favourable to you with these computers. As I said before, work out your system needs and shop around for the cheapest and best one that will suit these needs. Also take advantage of "deal-makers" that will be offered like applications software, higher-tier operating systems (Windows 7 Professional at Windows 7 Home Premium price), and extra RAM and hard-disk capacity.

Conclusion

Once the new CPU/GPU chipsets become the mainstream for desktop and portable computers, this could bring about a subtle but real change affecting the design, product-positioning and pricing of these devices.

Links

[1] http://windowsteamblog.com/windows/b/windowsexperience/archive/2011/03/07/sony-unveils-its-new-premium-vaio-s-series-laptops.aspx

Going back on your promises to rural and regional users

31/03/2011 04:00

Labor backflips on its NBN promise to regional Australia | The Australian[1]

My comments

Rural and regional Internet users are being short-changed again by a backflip that Labor has done with the National Broadband Network.

The kind of treatment rural and regional users receive

This is an example of continual second-rate treatment of rural and regional citizens when it comes to telecommunications.

Here, I remember living in the country in the 1980s when there was continual poor-quality telephone service. Here there was a poor signal-to-noise ratio with the phone line to where I lived at and this usually manifested in a lot of crackling through the call as well as frequent incidents of crosstalk which we often described as "crossed lines".

As well, if rural users want to contact services in metropolitan areas, they have to pay long-distance telephone rates for these calls. This is unless the service provider sets up a freecall or local-cost telephone number for people to ring in on.

Continuously, country users are limited to dial-up Internet and this is often at a substandard rate with slower-than-standard data speeds and longer connection-establishment times.

As well, country users cannot benefit from broadband because they are usually out of the proper "range" for ADSL services. Therefore they end up on the substandard dial-up services. If they are in "range" for ADSL service, they end up with substandard ADSL service.

What is happening with NBN

The Labor federal government had built their election campaign on the back of the National Broadband Network. This was to have the same cost of service across all of Australia even though the service will be provided "to the door" using fibre, wireless or satellite technologies.

Now they have done a backflip on this promise by not guaranteeing a price structure that requires the Internet service on this network to be the same for metropolitan, regional and rural areas. This is based around the excuse that the wireless technology that would be needed for the regional and rural areas will cost more to set up, especially in licensing costs.

I have seen some successful operations in the UK where next-generation broadband services have been rolled out to some rural villages in a cost-effective manner by local companies. Here, they had worked on the local deployments using technologies like VDSL-driven fibre-to-the-cabinet yet allowed the systems to be future-proof for fibre-to-the-premises.

The use of "anti-competition" measures in the NBN legislation would make it hard for a "go-getter" company to do what companies like Rutland Telecom have done in enabling rural towns with next-generation broadband.

Supporting the rural Internet needs properly

What needs to happen is for these measures to be adjusted to expedite service delivery to rural areas and facilitate the NBN or government to support local entities in deploying such technology to rural and regional areas. Then could then be able to provide retail service in to these towns or lease-back the infrastructure to the NBN for wholesale service provisioning.

As well, if there is an easement required on a property for running fibre trunks in the NBN infrastructure, the issue of fibre branches connecting "to the door" of the affected as well as adjacent properties from this trunk should be looked at.

The NBN doesn't even look at the issue of a genuine "universal service obligation" concerning broadband and there needs to be activity concerning this issue. This includes a minimum standard or service and a maximum price for the service similar to what is being prescribed in Europe. The costs could be offset via a universal service fund which could be supported either through line spending or a direct levy like one on service-provider turnover.

Conclusion

It therefore seems to me that the Australian government have lost the plot when it come to assuring competitive Internet access and a universal standard of Internet service in the country. They need to look at what other established countries are doing for when it comes to these factors and implement these issues effectively.

Links
[1] http://www.theaustralian.com.au/national-affairs/labor-backflips-on-its-nbn-promise-to-regional-australia/story-fn59niix-122602705 0160?referrer=email&source=AIT_email_nl&emcmp =Ping&emchn=Newsletter&emlist=Member

Product Review–Rotel RCX-1500 Network CD receiver

29/03/2011 07:42

Introduction

I am reviewing the Rotel RCX-1500 network CD receiver which is one of the first "big-set" hi-fi units that I have reviewed that can do proper Internet radio and benefit from the DLNA Home Media Network. Previously I have been reviewing Internet radios that are mainly "small-sets" which are table /clock radios or portables and are intended for use as secondary or auxiliary audio devices.

The product class

This unit is infact a CD receiver, a class of "single-piece multi-function" hi-fi music system which continues from where the music centres and casseivers (receivers with integrated cassette decks) of the 1970s and early 1980s left off. Here, some of these units were equipped with the functionality and quality of modest separate-unit hi-fi systems yet they offered this in a single box, which you could just hook up a pair of speakers to. The manufacture of high-sndard pieces of this class of equpment had diminished through the late 80s. This is although Bang & Olufsen were consistent in this field at a premium price and a few other manufacturers like Proton, Bose and Onkyo were releasing in to their model ranges one or two receivers with integrated CD, tape or MiniDisc transports that weren't just second-rate music systems.

Then there had been a slow but sure renaissance in this class of good-quality integrated-function hi-fi equipment as the trend for "downsized" living especially in "executive" city apartments became more intense. This is where most of the good hi-fi names ran with at least one CD receiver in their line-up that didn't come with a set of substandard speakers and this Rotel RCX-1500 that I am reviewing is one such piece of equipment.

[1]

Price

Unit alone: AUD$1999 (recommended retail price)

Speakers (Cabasse Antigua MT30): AUD$999 /pair (recommended retail price)

Functions

Analogue Radio FM RDS DAB+ Yes Internet Radio Yes Network Media Audio CD Yes Stored Memory USB memory key iPod /iPhone Yes

Connections

Input Count as for a device Audio Line input 1 x RCA-connector pair SPDIF input 1 (PCM – Coaxial and optical) **Output** Headphone output 3.5mm Pre-amplifier output RCA-connector pair **Network** Wi-Fi 802.11g WPA2 (supplied dongle) Ethernet 10/100Mbps (supplied dongle)

Speakers

Output Power 100 Watts (RMS – 8 ohms,) 2 channels Speaker Connections Binding-posts

This unit was tested with a pair of Cabasse Antigua MT30 bookshelf speakers connected using premium audio cables. These speakers were also on loan from the distributor so I can review this unit properly. They are built using an orthodox two-way driver arrangement and use a bass-reflex enclosure and can work with amplifiers that have a minimum power output of 75 watts and maximum of 500 watts. As far I was concerned, these speakers worked very properly with all kinds of music and could yield a decent sound for their size.

The Rotel CD receiver

Functionality comments

[2] Slot-load CD player

It is also worth knowing that this CD receiver has a pair of pre-out connections so one can connect it to a more powerful and better-sounding power amplifier or a pair of active speakers like an active subwoofer or some of the active speakers like B&O's Beolab range or any of the Bose Powered Acoustimass speakers.

It can connect to your home network via Wi-Fi or Ethernet using supplied network-adaptor dongles. The Ethernet option can also allow it to be used with a HomePlug AV network segment using an appropriate "homeplug" adaptor and I would recommend this as a "no-new-wires" option for connect this CD receiver to the home network.

This functionality allows this CD receiver to provide Internet radio or work with a DLNA-compliant media server that is on your home network. The only limitation with this function is that it doesn't work as a MediaRenderer which means that you have to select your network media using the Rotel CD receiver's display.

The tuner is "up to the minute" with broadcast radio in Europe and Australia by supporting FM RDS as well as DAB+ radio. There are two antenna connections for both FM and DAB but you can choose to use the FM aerial for DAB. It came with two aerials – the typical "T-wire" for FM and a small whip one for DAB. With this one, it was able to pick up Melbourne's DAB multiplexes reliably as long as it was near a window.

But I would rather that this unit be connected to an outdoor aerial especially for FM reception so it can provide clear signal reception. You may also be able to use a digital-optimised Band III aerial for better DAB+ reception especially on fringe areas.

You can connect an iPod or iPhone to the front USB socket using the data cable supplied with your Apple device and the sound

that is played off the iPod will be converted to an analogue form using the Rotel receiver's internal digital-analogue converter. As well, this same socket is used for playing music held on USB memory keys.

The CD player is a slot-load type that performs as expected for a decent-standard player. It can play the regular CDs or file-based MP3 discs and gives "best-case playback" for any CDs recorded with the HDCD mastering technique. This does yield to high-quality sound from these discs.

As for connection of external equipment, this is feasible with a line-in connection in the form of RCA connectors or SPDIF digital in the form of coaxial or optical connectors. There isn't a line-out connection that is independent of the volume control for use as a recording connection, which may limit this unit's utility with cassette or MiniDisc decks.

It is also controllable by a supplied remote control which has a numeric keypad for direct access to 30 presets in each of the radio bands – FM, DAB and Internet. As well, this remote also allows for direct access to tracks on a regular CD and is a preferred control surface when you are searching content on a well-stocked media server or using the CD receiver's setup menus.

[3]

The unit's remote control

This unit's amplifier is engineered for sound quality. Here, the volume control is a motor-driven potentiometer managed through the control on the front or the remote control. There aren't any tone-control options, which may please audio purists who believe that tone adjustment affects sound quality.

The display is the white bright fluorescent display but uses four lines of text. This also works with the menu-based operation for advanced functions.

Sound quality

The sound quality for the Rotel RCX-1500 CD receiver is what you would expect for equipment in its class. This is even so with the Cabasse Antigua speakers that I am testing this unit with.

It comes across as being tight and good across all frequencies. This means that it gives all the instruments in a sound recording a proper chance rather than sounding like the old pub jukebox. This has come across so well with well-recorded rock like Peter Gabriel's "1 – Car" album which was considered to be in the same league as Pink Floyd. Here, you still had that "punchy sound" while hearing the vocals and other instruments.

This system was even performing well with classical music especially as I was playing through a recording of Beethoven's Violin Concerto which was done with "period" instruments. Here, the combination of this CD receiver and the Cabasse speakers shone through the whole of this popular concerto and was clear

with all of the instruments.

As for handling the audio codecs, this amplifier answers the requirement for handling properly-encode music properly especially if you use the "maximum" throughput settings for the codecs like 320kbps MP3 or 192kbps WMA.

Limitations and points of improvement

The network connectivity could be improved on by not requiring the user to deal with easy-to-lose dongles. This is more so with Ethernet as most Internet-enabled hi-fi components and TVs use integrated circuitry with an Ethernet socket on the back.

As well, the Rotel could benefit from WPS setup for Wi-Fi wireless networks especially as most current-issue routers implement this easy-to-use setup method.

An improved version of this unit could support a proper tape loop and a phono input for use with a turntable especially as a lot of the older people may keep records or tapes lying around and could benefit from a simplified system with these inputs.

Conclusion

This is one network-enabled CD receiver that I would recommend for people who have a pair of good-quality bookshelf or "piece-of-furniture" speakers that they wish to keep going but want to benefit from newer sources like music held on their home network or iPod; or Internet radio. I would also consider this unit as a the core of a simplified music system if they want to choose their own good speakers.

This unit, along with the Cabasse Antigua speakers or bookshelf speakers of a similar standard, would be an ideal simple music system for use in an apartment or small house by people who place high value on music. It is especially more suitable with older retired people who are moving towards smaller flats or retirement villages.

Links

[1]
http://homenetworking01.info/wp-content/uploads/2011/03/2011–03-19–001.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed
[2]
http://homenetworking01.info/wp-content/uploads/2011/03/2011–03-19–002.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed
[3]
http://homenetworking01.info/wp-content/uploads/2011/03/2011–03-19–004.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed

Following the HomeNetworking01.info site–your options

28/03/2011 07:43

Hi all!

You may have come in to this site either via a Web search, an email or from the URL that you may have copied from posters, cards and other offline advertising that I may have put up around town; and have found the site of interest. But you don't have the time to keep checking on it for newer articles.

There are three ways to follow this site so you don't miss the latest articles:

1. **RSS feed** (Webfeed) – You can subscribe to an RSS feed using your feed reader. This may be integrated in your email program, Web browser or operating system;' or there will be many different applications for all the computing platforms that will show a list of articles in an RSS feed. Your browser may highlight the orange RSS icon to indicate that there is the Webfeed to subscribe to. Click on this to start subscribing with your browser's feed-reading function.

For other applications, the URL is:

http://feeds.feedburner.com/HomeNetworkingAndItInformationAndDiscussion[1]

This feed is updated as and when new articles are published.

2. **Your email inbox**. There is an option to subscribe[2] to this site so you have new articles appear in your email inbox. This will be provided in the form of a "Subscribe" form located in the sidebar on the right hand side of your page in the standard view and you fill in your email address, with a CAPTCHA-protected "opt-in" form popping up when you click the "Subscribe" button. Another way will be to visit this URL:

http://feedburner.google.com/fb/a/mailverify?uri=HomeNetworkingAndItInformationAndDiscussion[3]

When you fill in your email in either of these forms, you will get a confirmation email from Feedburner Email Subscriptions which has a link that you must click on in order to start receiving the latest articles in your email inbox.

The emails come on days where there are new articles posted and if two or more articles are posted on the one day, you will receive one email with all the articles.

3: **Facebook Feed**: If you are a member of Facebook, you can follow this site by either scrolling down to the "Visit this on Facebook" box and clicking the "Like" button in that box or visiting this Facebook page[4].If you haven't logged in to Facebook at that point, you will be required to log in.

Subsequent articles will appear in your Recent Items Facebook list under "HomeNetworking01.info" and you will have the introductory text of the article as the copy so you can follow through and continue reading it at the site. This may not be feasible if you are checking your Facebook account from a device that doesn't start a Web-browsing session when you click on a link.

These articles will appear as and when new articles are published.

At the moment, there isn't the ability to start email or Facebook subscriptions from the simplified mobile user interface unless you click on the links in this article. You may have to click this link[5] or click the "Go to Desktop View" option at the bottom of the page to open the regular view for creating an email or Facebook subscription. This will be a problem if you are viewing this from an Android or other tablet which shows the mobile view by default.

I hope this is of use to you as you keep following this site and reading the articles written within.

With regards,

Simon Mackay

Links
[1] http://feeds.feedburner.com/HomeNetworkingAndItInformationAndDiscussion
[2] http://feedburner.google.com/fb/a/mailverify?uri=HomeNetworkingAndItInformationAndDiscussion
[3] http://feedburner.google.com/fb/a/mailverify?uri=HomeNetworkingAndItInformationAndDiscussion
[4] http://www.facebook.com/pages/Homenetworking01info/178689088847
[5] http://homenetworking01.info/?wpmp_switcher=desktop#utm_source=feed&utm_medium=feed&utm_campaign=feed

Encouraging the use of the UPnP Printer device class

28/03/2011 05:25

The UPnP Forum have established a printer device class in the early days of this standard and have provided an "improved-printing" service for this device class. This was an attempt to allow a device to print text, Webpages and photos without the need for the device to have printer-specific drivers.

[1]

HP Envy 100 UPnP-enabled all-in-one printer

I know that a lot of Hewlett-Packard's network-enabled printers in the Photosmart range like the Photosmart Premium Fax C309a

[2]support this functionality. This also includes the HP Envy 100 printer[3]which I have just reviewed. Some other manufacturers like Epson may support this functionality in a few of their products.

[4]

HP Photosmart Premium Fax C309a

The reason that there is inaction concerning the UPnP Printer device class is that there aren't enough client devices that properly support this function. So far, some of the Nokia phones that work on the Symbian S60 Third Edition platform like the N95 and N85 can print photos to these printers using this platform. But I know of no other devices or platform apps that exploit this functionality.

Key enabler for this device class

Platform devices

An increasing number of manufacturers are moving towards the use of device platforms like Android and Maemo as the baseline operating system for embedded-platform devices like set-top boxes, PVRs and TVs as well as smartphones and tablet computers. These platforms typically use "apps" as a way of adding functions to the device, effectively turning the device into something that resembles a general-purpose computer. These "apps" are typically written by third-party developers and provided through an "app-store" or similar menu that is hosted on the device, either for a low cost or, in a lot of cases, for free.

These platforms, save for the Apple iOS platform, don't have a printer-interface function that these apps could exploit and what is happening is that printer manufacturers are writing photo-printing apps for these platforms that work with their devices. They can support the UPnP Printer Device Class as a printing interface rather than reinventing the wheel for this function.

Key applications

Hardcopy from the tablet computer

As the tablet computer becomes increasingly popular amongst home and small-business users, there will be a requirement to turn out hard-copy from the apps loaded on these devices. Examples of this include printing emails or chapters from ebook apps to printing out photographs taken using the device's integrated camera.

At the moment, the iPad can work with AirPrint-enabled printers like the HP Wireless-E B110a, the HP Envy 100 and the HP Colour LaserJet CM1415 that have been reviewed in this site. Windows 7 tablets can use the conventional driver-based Windows printing platform but Android and WebOS tablets don't have an integrated printing platform. Access to the printers for these platforms is through photo-printing apps which are limited in purpose because they only print photos; and are also tied to particular manufacturers' printers.

If Google, HP or other companies who are behind tablet-computer and smartphone operating systems implement the UPnP Printer Device Class, they can add a driver-free printing ecosystem to these operating systems.

Hardcopy for Interactive TV

As the TV set becomes integrated with the Internet, there will be an interest in interactive TV. This will allow the viewer to interact with broadcast material using their remote control. Initially, it is being used with some broadcast-TV set-top boxes that use a cable-TV or dial-up-modem return path to facilitate purchasing of pay-per-view content or increasingly to allow viewers to register votes when they watch panel shows or talent quests. The Internet path is increasing the interactive TV abilities through the delivery of extra material to the viewer, thus permitting concepts like "catch-up TV" and on-demand availability of extended interviews and supplementary material. It is being augmented by set-top boxes, PVRs and TV sets (especially the main-lounge-area ones) being equipped with network connectivity.

The UPnP-enabled printer can work well with Interactive TV by offering a hard-copy option for editorial and advertising content. In the case of editorial content, this could lead to the availability of factsheets, end-of-show leaderboards and similar material. Even the commercials could be augmented with "print-to-redeem" coupons, "specials lists", factsheets and product-disclosure notices that the viewer can print out at the touch of a button when they see the ad. This can be extended to programs like game shows or talent quests that exploit viewer participation and use "print-to-redeem" coupons as incentives for viewers who participate in these shows.

Games and apps that are part of the interactive TV experience can be augmented with hardcopy options. Examples of this could be skill-based games that reward users with prizes for successful completion or being at the top of the game's leaderboard; or apps that provide hardcopy information on demand.

Companies who are behind interactive-TV platforms like those involved with Internet TV could implement UPnP Printer Device Class in order to open up the possibilities offered with hard copy

for Interactive TV.

Hardcopy snapshots from digital cameras and electronic picture frames

The UPnP Printer Device Class offers the ability for a connected electronic picture frame or digital camera to print snapshots through an existing home network rather than having to use "peripheral connections" like USB or Bluetooth.

This can avoid the need to locate a frame that receives "new" images via email or online services near the printer to print out the snapshots. Similarly, one could print out snapshots taken with a Wi-Fi enabled digital camera or mobile phone without worrying about whether the camera will work with the printer. This would be more acceptable for people who like creating "picture walls" from special events that they host. These "picture walls" are collections of pictures of the event taken by guests that are stuck to large sheets of cardboard.

Conclusion

But there are more applications like the ability to obtain a copy of a "dashboard" screen from a monitoring device through to "on-demand" news-printing from other devices. It also means that the UPnP Printer Device Class can open up paths for innovation when it comes to the functionality roadmap for a device targeted at a home or small-business user. As well, the UPnP Printer Device Class can also be useful as a "generic printer driver" for general-purpose computers so that basic text and graphics print jobs can be turned out without the need for awkward print drivers.

What needs to happen is that companies need to get serious about **implementing** this device class in their printers, computers and network-enabled devices.

Links
[1]
http://homenetworking01.info/wp-content/uploads/2011/03/2011–03-19–007.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed
[2]
/2010/04/product-review-hewlett-packard-photosmart-premium-fax-c309-series/#utm_source=feed&utm_medium=feed&utm_campaign=feed
[3]
/2011/03/product-reviewhp-envy-100-eprint-enabled-all-in-one-printer/#utm_source=feed&utm_medium=feed&utm_campaign=feed
[4]
http://homenetworking01.info/wp-content/uploads/2010/04/2010–04-19–001.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed

Product Review–HP Envy 100 ePrint-enabled all-in-one printer

24/03/2011 02:27

Introduction

I am reviewing the HP Envy 100 ePrint-enabled all-ine-one printer which is another member of the HP "Envy" high-end stylishly-designed equipment range. This printer is styled not like an ordinary all-in-one printer but something that wouldn't look out of place alongside domestic hi-fi or home-cinema equipment.

[1]

Print Scan Copy E-mail Paper Trays Connections Colour Colour Colour Colour 1 x A4 USB 2.0 Ink-jet 1200 dpi HP ePrint email-to-print service 802.11g/n Wi-Fi wireless Auto-duplex

Prices

Printer

Recommended Retail Price: AUD$399

Inks and Toners

Standard **High-Capacity** Price Pages Price Pages Black AUD$22.62 200 AUD$44.49 600 Colour AUD$26.52 165 AUD$52.30 440

The printer itself

[2]

The printer with its scanner lid open and paper input and output

exposed

There is a lot about this printer's styling that makes it not like the typical all-in-one printer that I have used or reviewed. This printer has a design that wouldn't look out of place in a hi-fi or home-theatre equipment rack with its slimline and neat styling. Here, it would be as slim as the typical VHS video recorder or "personal-TV service" unit. Even the scanner lid reminds me of that flat-glass lid used to cover the turntable on a mid-1980s "music-centre" stereo system because of the way it lies flush with the top of the printer and is made of that similar glass.

Where do the documents come out of?

The way the printer is styled may confuse some people because there isn't an obvious paper tray or output tray.

[3]

The printer's paper output tray

When you want to use the printer from the control panel, you work it using a large touchscreen on the front of the unit. This touchscreen can be positioned at an angle for easier operation but will swing up when the printer is printing out anything. The paper is loaded in to a shallow removeable tray which you pull out from the front of the printer.

Even the SD slot for your camera card may be hard to find but it is located on the top right edge of the printer, under a small flap.

Setup

The printer can work with 802.11g/n WiFi networks that are secured using WPA2-PSK technology. You enter the passphrase for these networks using a virtual keyboard on the unit's touchscreen; but it also works properly with WPS "simplified-setup" routines that most recent-issue home and small-business routers support.

On the other hand, the software that is supplied on the CD-ROM leave a lot to be desired. It doesn't operate properly with network setups and you may have to try many attempts at setting this software up on your computer. This is more so with firewall software that may be slow to respond.

Walk-up functions

The printer works as expected for a colour copier. As well, it can print from or scan to SD cards or USB memory keys. Like with all printers, these functions could be improved through increased memory in the unit. Here, images obtained from the scanner or removable media could be copied to the memory before being printed so as to allow quicker and more productive operation; such as being able to quickly copy many pages or print pictures from your camera then continue snapping more pictures.

Through the use of the ePrint Web apps, this printer can print documents on demand. As well, some of these ePrint apps work as client programs for various photo-sharing or social networking sites, so you can print pictures from your albums that exist on these sites.

It also supports the HP ePrint "email-to-print" system which allocates the printer an email address so you can send documents or photos to that address for printing. This also allows for Apple iOS devices to print documents and images directly to this printer using AirPrint.

It is also worth knowing that Android users can download the "HP iPrint Photos" app from the Android Market to their device so they can print photos through this printer. At the moment, there isn't a full document-print solution available for this platform yet.

Computer functions

When used with a Windows 7 machine, this printer works tightly with the operating system, thus using functions like the Device Stage.

Even the ability to set up device-initiated scanning for a network-connected printer requires you to visit the Device Stage which comes up when you click on the printer in "Devices and Printers". This feature has still got some problems with reliability in that it won't start properly or expose the options to the printer's control panel. This function is still something that has to be worked out and should be part of the operating system as I have touched on previously[4].

Other than that, it does work properly as far as computer-initiated printing goes. It also does offer proper support for basic and advanced UPnP printing functionality; something I find that is not implemented in many client devices like set-top boxes. This is not enabled by default and you would have to go to the printer's Web page which is at its URL, then go to "Networking" to select and enable this function.

Print Quality

This printer works as expected for an inkjet printer when it comes to printing documents. But the real test I notice with these inkjet printers is how they handle photographic images. The pictures don't come out as saturated as most of the other inkjets that I have tested. As well, they are not as dark as those printed on most of the other inkjet printers that I have tested.

Limitations and Points of Improvement

As with all HP inkjet printers that have auto-duplex printing, this function still requires a significant top and bottom margin, which can be very limiting for desktop publishing applications. I have raised this issue on forums operated by HP, but they say that this is a designed-in limitation to assure proper auto-duplex operation but I have seen auto-duplex-equipped inkjets available from other manufacturers, namely Canon, which can print this way without requiring the top and bottom margin.

As well, the use of a tri-colour ink cartridge makes the printer more costly to run because you can't replace individual colours as needed. This could be improved upon by HP when they refine their low-profile print mechanism that is used in this printer. The slimline design also has a limitation with the paper tray not being able to hold much paper.

The manufacturer-supplied software could benefit from a lot of work on it, especially with the way it operates with network printers. This includes making it work tightly with the operating system's services and properly discovering the printer and announcing the computer's network location. This is always something that manufacturers tend to forget about when designing their printers.

Taking the concept further

The way HP have integrated a duplex-capable inkjet print mechanism with "front paper feed" as well as an LED-based scanner mechanism into a chassis the size of a typical VHS video recorder has amazed me with this unit.

Here, they could take the concept further with various product ideas for inkjet printers and similar devices. One could be a rack-mount printer for "built-in" applications, where the printer is pulled out like a drawer when it needs to have new ink added or be serviced.

Similarly, there could be the ability for HP to design a transportable "all-in-one" printer modelled on the Envy 100 that is designed for "on-location" workforces. This would have a handle of a style not dissimilar to that found on a boombox and having the scanner lid kept closed by a latching mechanism. Electronically, it would have full WiFi and Bluetooth connectivity and work on 12 volts DC, thus being able to work from a car's cigar-lighter socket or a 12-volt rechargeable battery pack.

As well, this mechanism could encourage HP to work towards mainstreaming low-profile "front-feed" inkjet printer designs for the home and small-business market/

Conclusion and Placement Notes

This printer is targeted to those who place a lot of emphasis on style and may suit those of us who are particular about what can be placed in the common living areas of the house. But it wouldn't be worth using as a main printer for a home or small business because of the two-cartridge system or the reduced paper capacity. Here, I would recommend it for use as a secondary printer intended for use in the family room if you can accept the price for this application.

Links
[1]

http://homenetworking01.info/wp-content/uploads/2011/03/2011-03-19-007.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed
[2]
http://homenetworking01.info/wp-content/uploads/2011/03/2011-03-19-009.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed
[3]
http://homenetworking01.info/wp-content/uploads/2011/03/2011-03-19-008.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed
[4]
/2011/03/the-printer-initiated-scan-to-computer-feature-for-network-applications-could-be-standardised-and-implemented-at-operating-system-level/#utm_source=feed&utm_medium=feed&utm_campaign=feed

---

Poor print quality from your Epson or Brother inkjet printer? Airlocks may be the problem

22/03/2011 03:32

Introduction

If you own an Epson or Brother inkjet printer, you may end up with a situation where there is reduced print quality for particular colours even if you have just put in a new ink cartridge. The symptoms will be in the form of one colour not appearing in your printout or gaps at regular intervals in the printed output.

This is a problem that I have experienced previously with an Epson inkjet printer that I had earlier on through 2000 to 2004. As well I had run in to this problem when I was reviewing the Brother MFC-6490CW[1]A3 inkjet multifunction printer; and had to run this printer through the cleaning cycle a few times after installing a new cartridge.

The piezoelectric print head working as a pump

This may be to do with the way these printers work compared to most other brands. Here, the ink is pushed through the printer using a piezoelectric pump mechanism which integrates technology similar to what is used to force the hot water through the ground coffee in a domestic espresso-coffee machine. On the other hand, the HP, Canon and Lexmark printers use a thermal a.k.a. "bubble-jet" method of pushing the ink drops through the printhead in a similar vein to the way water is pushed through a drip-filter coffee maker.

If you happened to fill one of the previously-mentioned espresso machines with water after allowing it to run dry, then decide to make a coffee, it will take a very long time for the coffee to come through. As well, you will hear the machine's pump make a softer noise as it takes on the water. This is what is happening as the pump is being primed and airlocks are being removed out of the pipework in the machine.

Similarly, what can happen with your Epson or Brother printer is

that after allowing an ink to run dry, you will end up with airlocks in the pipework or printhead. This may be more so if you try to "run it out" beyond the "out-of-ink" warning so you could get those last few pages printed.

What can you do?

The cleaning cycle

If this happens, you may have to do one of two things. One would be to run the printer through the "cleaning" cycle a few times as this will "prime" the printhead pumps. You may have to do this after you install a new ink cartridge.

In most of these printers like the previously-mentioned Brother printer, you will need to start the cycle through going to the "Maintenance" or "Setup" menu on the printer's control panel, then select the "Cleaning cycle" function. Older single-function printers may have a dedicated "cleaning cycle" button or require you to hold down a button like the "Paper Eject" button to start this cycle. To be sure, check the instruction manual that has come with the printer concerning how to activate this cycle.

Creation and use of "printer cleaning sheets"

Another would be to prepare a "printer cleaning sheet" for each colour. This would be a drawing that has a rectangle of the specified colour (black, cyan, magenta or yellow) that covers at least 50% of an A4 or A3 sheet of paper. You could create this with your favourite graphics, presentation or desktop-publishing program. Even a "paint" program like Microsoft Paint could do the job. Then make sure you save this as a file. If you created a multi-page file, you have one page per colour and print this page out for the colour that needs attention. Otherwise, print out the file pertaining to the colour that needs attention. You may have to print this a few times to prime all of the pumps in the printhead.

The idea behind creating and printing these sheets of paper is that the printer has to keep running the pumps continuously so they are primed and the ink starts flowing through all the nozzles properly. As far as the paper is concerned, you just then use the blank side of these sheets you printed out as notepaper, such as to keep beside the telephone.

Conclusion

Once you know how to use the cleaning cycle and /or create a "printer cleaning sheet", you can be able to avoid an unnecessary service call or product return concerning your Epson or Brother inkjet printer.

Links
[1]
http://homenetworking01.info/2010/07/product-review-brother-mfc-6490cw-a3-capable-multifunction-inkjet-printer/#utm_source=feed&utm_medium=feed&utm_campaign=feed

Authenticating users to services on limited-user-interface devices

18/03/2011 07:12

There is an increasing trend to interlink services like photo-sharing and social-networking services with network-enabled devices other than PCs or "lightweight computers" like smartphones or tablet computers. This includes set-top boxes, network printers and digital picture frames and example applications include showing photo albums from Picasa or Facebook on the large TV, printing out pictures from Picasa or Facebook without the need for a computer or showing one's Facebook Feed on an advanced Internet terminal like the Pure Sensia. One reason that is leading the concept on is the use of device platforms like HP ePrint, Panasonic VieraCast and Google TV, where an operating-system developer or a device manufacture use the platform to build up an "app" library for the device or operating system.

It will also become more common with VoIP telephony encouraging the development of "personal landline telephone" services as well as "personalised home environments" being brought about by home automation and security functions being part of the connected home.

The current situation

The main problem with these services is that they require the user to log in to the service using an alphanumeric user name and an alphanumeric password. This would be best done using the regular QWERTY keyboard of a computer.

But most of these devices would require one of these methods to enter the credentials:

- **"Pick-n-choose",** where the user uses a D-pad on the device's control surface to pick letters from a letter grid shown on the device's display. This is a method used primarily with set-top-box applications like "Pixel Eyes" (a Picasa /Filckr front-end) for TiVo; or used on most Internet radios to determine the network password for a Wi-Fi network.
- **Small on-screen QWERTY keyboard** for a touchscreen device. This is a practice used on smartphones and tablet computers that have this interface but is becoming common with network printers and other devices that use a touchscreen. This interface can be awkward and prone to errors if the device uses a small screen.
- **"SMS-style" with a 12-key keyboard**. This is where the device is equipped with a 12-key numeric keyboard not dissimilar to a telephone and the user enters the credentials as if they are tapping out a text message on a mobile phone. This practice may be used on communications devices (dialling phone numbers), security devices (entering access codes) or consumer electronics (direct-entry channel /track selection).

- **26-key alphabetic keyboard**. This is where each letter of the alphabet is allocated a key usually in a 5×5 matrix in alphabetical order. You still may have to press a button to change case or switch to numeric or punctuation mode. This has been used with some of Sony's MiniDisc decks for track labelling and is still used with some Brother labellers for entering label text, but is not commonly being used as a text-entry method for consumer electronics devices due to size, design or cost limitations.

As well, most of the implementations don't allow for proper "hot-seat" operation by remembering just the user name; and therefore require the user to provide both the user-name and password when they want to use the service. This can then be made more awkward with the interfaces listed above.

Facebook's login method

Facebook have improved on this with their HP ePrint app which is part of the HP Envy 100 printer which I have on loan for review. Here, the printer displayed an "authentication code" which I had to enter in to the Facebook Devices page (http://www.facebook.com/devices[1]). Here, you would have to log in with your Facebook credentials if you haven't done so already. Then the printer is associated with your Facebook account.

The only limitation with this method is that the device is bound to only one FB account and multiple users can't switch between their Facebook accounts. This can also make a Facebook user more vulnerable to undesirable control-panel modification to their account if the app allows it.

The reality with most devices

Most devices like network printers or set-top boxes are typically operated by multiple users. What needs to happen is a simplified multi-user login and authentication experience that suits this class of device.

This is also more so as the authentication parameters used by Google (Picasa, YouTube), Facebook and others are becoming central to the "single sign-on" environments offered by these service providers and these "single sign-on" providers could appeal as credentials bases for home network applications like NAS management or even building security.

What could be done

A situation using a combination of the "Facebook limited-device login" method and the login experience that one encounters when using an automatic teller machine or EFTPOS terminal would be appropriate here. This is where a device can keep multiple "device account codes" for multiple accounts as well as securing these accounts with a numeric PIN.

Main points

A credentials service like Facebook, Windows Live or Google could add a simplified "numeric PIN" field for limited user-interface devices as well as the text-based password.

Devices that support "limited interface" operation create an "device account passcode" for each account that is to use the device. This allows the device to create a reference between the account on the service and the account on the device. When a user is added to the device, this would be shown on the device's user interface and the user enters this in to a "Devices Login" page at the credentials service's Website.

Add user

1. A user selects the option to "add user" to the device using the device's control surface.

2. The device's user interface creates a "device account passcode" and shows it on the device's user-interface (LCD display, TV screen, etc). In the case of a network printer, it could also print out this "account passcode".

3. The user transcribes this "device account passcode" to the credentials service Website (Google, Facebook, Windows Live, etc) using a regular computer or other Web-browser-equipped device.

4. If the user hasn't previously defined a numeric PIN for "limited-interface access", the service Invitess user to enter and confirm a numeric PIN of own choosing if they agree to "protected device access". This could be done either through the Web browser or continued at the device's control surface.
   If they have previously defined the numeric PIN, the device will challenge them to enter the numeric PIN using its control surface.

5. The user's account is bound to the device and the user would be logged in.

Switching between users on a device;

1 A user would go to the "Users" menu on the device and selects their user name represented as how they are known on the credentials service (Facebook name, etc) from the user list.

2 The user then keys in the numeric PIN.

3 If successful, the device is "given" to user and the user then interacts with service

Other points of note

All users have opportunity to "remove themselves" from device by going to the "user settings" UI and selecting "Remove User" option. Some devices may allow privileged users to remove other users from the device and there could be the option for users to change their numeric PIN from the device's control surface.

It could be feasible for a device to provide varying levels of access to a user's account. For example, a device shared by a household could allow "view-only" access to certain data while a user who is directly logged in can add or modify the data.

There could be the option to integrate local user-authentication information on devices that support this by relating the "device passcode" with the local user-authentication data record. This could allow a device like a security system to allow the user to gain access to functionalities associated with the credentials service but the user still uses their regular passcode associated with the device.

Conclusion

Once companies like social-networking or photo-sharing sites work on ways to support multi-user one-device scenarios with limited user-interface devices, this could open up paths of innovation for the devices and the services.

Links
[1] http://www.facebook.com/devices

At last, two QNAP VioStor Network Video Recorders targeted at the small business

16/03/2011 03:53

Press Release

QNAP Security Moves into the Consumer Mainstream Security by Introducing A New Affordable Standalone Surveillance Video Recording System[1]

Product Page

VioStor VS-2004L[2] – 4 channels (4 caneras concurrently recorded)

VioStor VS-2008L[3] – 8 channels (8 cameras concurrently recorded)

My Comments

I have shown interest in the QNAP VioStor VS-20xL series network video recorders because QNAP have presented the equipment as an affordable recording solution for small businesses who are taking their first steps towards IP-based video surveillance.

One reason these units earn their keep as far as I am concerned is that they permit the business to improve the video surveillance system without the need to replace more equipment than they have to replace. The only limitation with these units is that they require an external computer as the video-surveillance system's visual display and they can only maintain two hard disks per unit, support basic single-disk operation as well as dual-disk "large-volume" (JBOD and RAID 0) and dual-disk mirrored (RAID 1) operation.

There is even the ability to support capacity and operation-mode changes in certain situations without having to shut down the NVR. Other examples of upgradeability include the ability to buy another QNAP VioStor system, especially one of the VS-200xL Series, to increase the concurrent recording capacity as you add more cameras but keep the existing unit recording away.

As well, these systems still provide the full expected functionality like alarm recording on motion detection, camera "alarm input" or URL-based alarm triggering. The latter functionality can work with software that can pass URLs on certain events like particular transactions such as voids and no-sales.

They are of a similar size to an entry-level dual-disk

network-attached storage and do support connectivity to USB devices like USB storage devices and control links for uninterruptible power supplies that serve this unit. The unit can backup the video data either to a USB hard disk or to a network-attached-storage device on the same network.

These recorders can work alongside cameras that are ONVIF-compliant but this may not guarantee a true "plug and play" experience when you want to "evolve" the system yourself.

There are still a few "holes" concerning the useability, such as inability to support integration with UPnP-compliant routers when setting up remote-monitoring links. This is even though manufacturers like Draytek and AVM are supplying small-business-grade routers that have this functionality. As well, there isn't a standaline client-side program for the common desktop operating systems that works as the system's dashboard. This could affect system performance especially with older computers or standard operating environments that are based around competing Web browsers.

These units, especially the VS-2004L, could become the heart of an "analogue-upgrade" kit which has one of these units and a 4-channel video encoder which allows a small business to add network functionality to their existing analogue-camera-based CCTV system. As well, the VS-2004L, when worked along with four capable network video cameras, could be what is needed to provide video surveillance for something like a small shop.

At least this is a step towards fulfilling a challenge of providing an affordable IP-based video-surveillance system for the small business that doesn't skimp on quality or functionality.

Links
[1] http://www.qnap.com/PressRelease_detail.asp?pr_id=230
[2] http://www.qnapsecurity.com/pro_detail_feature.asp?p_id=196
[3] http://www.qnapsecurity.com/pro_detail_feature.asp?p_id=195

Is it worth it to put full broadband in the "family house"?

15/03/2011 02:00

What is the "Family House"?

The "Family house" is typically a house, that is usually resided in by one or two older parents where the children have "left the nest". The adult children and their grandchildren regularly visit this house to see the parents and, in most cases, they stay in this house on a temporary basis.

Such situations typically include the children who normally are out of town coming in to town for business, leisure or to attend family events; the children seeking temporary accommodation while their house is being built or renovated, or are between houses. It may also include the "family house" being close to a place of study which a grandchild is enrolled at and the grandchild stays there while completing a course of study.

This concept may also extend to any occasional-use

accommodation that the family shares responsibility in maintaining, like city apartments or holiday /seasonal houses.

Common practice with IT at these locations

[1]

Compaq Presario CQ42 entry-level laptop

In these places, there may not be an intention to have full Internet service at these houses because the main householder may not be a regular Internet user. But what can happen is that other people in the house make regular use of the Internet. This would typically be achieved through each device that other people bring in using its 3G or similar wireless-broadband service for their Internet.

A significant cost difference

But this may only work best with one rarely-used device on the premises. This is because most of the wireless-broadband services work on bandwidth that is narrower than wireline broadband services like cable-modem or ADSL services.

As well, the tariff charts for these services are typically more expensive than most of the wireline broadband services. Here, you end up paying more for the same bandwidth allowance and usage quota than you would for a cable or ADSL broadband service of equivalent standard or, for the same money you pay for a wireless-broadband service, you would obtain more bandwidth and usage quota.

Should I establish the full home network here?

It would be worth it to establish the full home network with a cable or ADSL broadband service if there is at least one Internet terminal that is used regularly by at least one of the parents, a relative or another regular houseguest. The Internet terminal, which can be a desktop, "all-in-one" or laptop /notebook computer or a tablet MID like the iPad, can be either owned by the parent or a regular houseguest like the grandchild who is staying regularly at that location.

The Internet deals commonly available

The common marketing practices amongst most wireline broadband Internet providers who run a voice telephony or multichannel pay-TV service is to offer a sweet deal where the customer benefits from reduced service costs if they have their telephony or TV service provisioned by this Internet provider. Some of these deals are provided as "triple-play" packages especially if all services come through the one physical line.

I often suggest that people take advantage of these abovementioned offers when choosing their Internet service for these locations because this may help with saving money on this service. These deals will usually be advertised in brochures that accompany the regular bill for the phone or pay-TV service that they currently are subscribed to.

In some houses where there are older people who don't use the internet frequently, one or more younger people who make use of the Internet could incite the older people to make increased use of the Internet. This can be done by the younger person sharing their computer with them, demonstrating various Internet and computing skills and assisting the older person with these skills.

As well, you may find that there are new media paths being opened up by a home network associated with a wireline Internet service in the "family house". Examples of this include use of Internet radios that pick up the Web feeds of overseas and obscure radio stations as well as access to Internet TV through the use of a compatible TV or set-top box and music, pictures or video on-demand through the house with cost-effective equipment.

Who should bear the extra costs

Issues that may come up include whether the houseguests like the children should cover any extra costs associated with use of a full broadband Internet service at the "family house" if the main householder isn't the one using that service. This may be of little impact to the guests because the wireline broadband services will be relatively cheaper than running a wireless broadband (3G or 4G) service which just services one computer.

Establishing the full home network

The network-Internet "edge"

[2]

Netgear DG834G ADSL2 wireless router

You may have to make sure that you use a wireless router if you have a laptop computer or other portable Internet device on the premises as the network-Internet "edge". Most of these devices are for sale at very affordable prices and you could get one through your Internet service provider as part of your broadband Internet deal. As well, I have written a buyer's guide about the entry-level wireless routers. The limitation with most of the units supplied by your Internet service provider is that they may yield average performance and may not offer the functionality as a retail-supplied unit.

Assuring proper wireless coverage

Some houses that have interior walls mode out of double-brick or stone may have problems when it comes to operating a wireless network. This is something I have touched on in this Website [3]many times and can be handled with an auxiliary access point installed in the area where wireless-network coverage is below par and connected to the router via an Ethernet or HomePlug wired backbone as explained here.

It is also worth knowing about how to encompass outbuildings [4]like bungalows in to the scope of the home network, a reality which will be of importance for country or outer-urban properties. Here, I have written a good feature article on how to achieve this goal in a manner that is best suited to your particular scenario.

Printers

[5]

Canon PIXMA MG-6150

As well, when you need to install or upgrade the printer, you may need to go for a unit that has network connectivity of some sort. If the main computer device happens to be a tablet computer, you may have to look at a printer that is supported by an app or the tablet's operating system. In the case of the Apple iPad, you may have to use an ePrint-enabled HP printer.

You don't have to have a machine with all the "bells and whistles" if it is not going to be used regularly – here an economy-level network capable printer like the HP Wireless-E B110a may just suffice. Even so, you should prefer a printer that uses separate colour cartridges rather than the tri-colour

cartridge because you won't be wasting colour ink if one colour runs out.

There is an exception if the house has a regularly-used fax machine. Here, you could replace the fax machine with a network-enabled multifunction printer which has integrated fax capabilities. Again, these would be much more cheaper to run than the typical older "thermal-belt-driven" fax machines that some households still consider as fax machines.

Network-attached storage devices

It may be worth considering the purchase of a one-disk network-attached-storage device at a later time as the network is used more. This may allow for pooling of common files like driver files for various peripherals as well as a backup storage for data held on one or more of the computers.

As well, most of these devices provide media-server functionality for Apple iTunes and standards-based DLNA setups so that your pictures, videos and music can be "pulled up" on demand. This may work well as a central media store which can be used as a way of "offloading" the media from a computer's hard disk or making it available to everyone at all times without the need to have a computer on all the time.

This function will become more relevant as more consumer AV equipment becomes equipped with some form of network connectivity and is able to play or show AV content from the Internet or media servers like these network-attached storage devices. Infact I have covered this topic very heavily on this site and you can look at this article here as it pertains to these devices as media servers.

Conclusion

I would recommend that you look at the value of providing a full home network with wireline broadband service to the "family house" if you notice that there is a strong likelihood of regular Internet use there.

Links

[1]
http://homenetworking01.info/wp-content/uploads/2010/06/2010–06-23–001.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed
[2]
http://homenetworking01.info/wp-content/uploads/2009/12/Netgear-DG834G-router.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed
[3]
/2008/11/feature-article-extending-your-wireless-networks-coverage/#utm_source=feed&utm_medium=feed&utm_campaign=feed
[4]
http://homenetworking01.info/2008/11/feature-article-multi-building-home-networks/#utm_source=feed&utm_medium=feed&utm_campaign=feed
[5]
http://homenetworking01.info/wp-content/uploads/2011/03/2011–03-09–002.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed

Bridging common Internet technology with the courtroom

12/03/2011 05:44

Article

BBC News – Byte-sized revolution heralds Twitter in Scottish court[1]

My Comments

Over the many hundreds of years, the courts of justice, especially those countries that work to British common law like the UK and Australia, have been overly cautious about the use of recording and reporting technology during the cases brought before them.

Now, a sentencing hearing held in the Scottish High Court has become the first courtroom venue to allow the use of Twitter to permit dissemination of information by observers. The Twitter-based technology would have worked well with remand and sentencing hearings in criminal cases or the conclusion of a case; where there are short exchanges. As well, these hearings, especially the remand hearings may work as a logical bookmark for a court case. On the other hand, "blog-type" reporting, where a regular bulletin is published on a Web page; at the end of each day's proceedings, could become relevant for long-form civil and criminal cases.

One main concern that the judiciary would have about this is the protection of justice against situations like "trial by media". It also may be of concern with criminal, family and other cases involving children or other vulnerable people and there is a desire in these cases to limit exposure of these people to pejorative media coverage.

I would suggest that the judiciary investigate the issue of the courtroom and the Internet through various means. This could include integration of questions regarding Web coverage of cases being part of specific cases across the legal fabric; trial-running of specific provisions in particular hearings or cases like what the Scottish High Court had done and even having particular cases of common interest being live-blogged by trusted reporters. As well, lawyers, judges and magistrates who have valuable knowledge or experience concerning the online courtroom should be encouraged to publish their findings as much as possible. The legislative pillar of government should also investigate this topic in case laws have to be revised concerning this practice.

As well, there could be investigation in to secure RSS feeds as a technological measure for the justice system. This is where people have to be authenticated before the can have access to this feed. This could be extended to a courthouse running a case-specific "keep-u-posted" RSS feed service searchable by case number or participant so that people who are part of or are following a case can know what is going.

Once the judiciary investigates the feasibility of the "online courtroom", they can integrate this pillar of government in to the "e-government" agenda. As well, those who do cover a court case using live-blogging or other online techniques need to keep core principles of justice in their minds.

Links

[1] http://www.bbc.co.uk/news/uk-scotland-12297482

Product Review–Canon PIXMA MG-6150 multifunction inkjet printer

10/03/2011 02:59

Introduction

I am reviewing the Canon PIXMA MG-6150 multifunction inkjet printer which is positioned as the top inkjet multifunction in Canon's lineup that isn't equipped with fax functionality.

[1]

Print Scan Copy Paper Trays Connections Colour Colour Colour 2 x A4 USB 2.0 Ink-jet 600dpi resolution Print-to-CD carrier Ethernet, 802.11n WPA2 WPS wireless Auto-duplex Optional Bluetooth module

Prices

Printer

Recommend Retail Price: AUD$299

Optional Extras:

Bluetooth module: BU-30 $69

Inks and Toners

Standard Price Pages Black 23.95 2185 Cyan 23.95 462 Magenta 23.95 437 Yellow 23.95 450 Photo Black 23.95 328 Grey 23.95 1515

The printer itself

This machine comes in a piano-black finish and has the user-interface LCD lying flat with the top of the lid. But when you turn it on, the LCD screen lights up and various touch buttons light up in a manner that isn't dissimilar to either the way a pinball machine or the dial panel on a mid-1970s stereo receiver lights up.

As you use the printer in its various operating modes, some of the buttons light up as required. These buttons are actually touch-panel buttons which will make you think somewhat of operating some of the mid-1980s B&O hi-fi equipment, especially the Beogram CDX CD player which had this similar kind of touch panel. As well, the main display is able to come up at an angle by pushing on a button located behind the display.

[2]

The display can come up at an angle

[3]

The printer lit up in operation mode

Walk-up printing

The printer has various "walk-up" functions like copying and printing from camera cards. As well, it can print from cameras using PictBridge, which I have used to print "proof-prints" of the pictures that I took for this review. It can even print PDF documents from USB memory sticks. But its handling of this function can be very fussy at times, especially if you use a PDF prepared by a desktop-publishing program.

As well, there is the ability to create your own stationery like notepaper, graph paper and music manuscript paper. For this latter paper type, you can turn out 12-stave pages which is a lot more flexible for most music tasks like "vocal and piano", organ or "four-part harmony" music.

Computer functions

The software that is supplied on the CD-ROM can be very tricky to load and can think that there isn't the printer available. But I have visited Canon's Website and downloaded the latest version of the software and this has loaded properly and discovered the printer as it should.

The device-initiated scan-to-PC software leave a lot to be desired. The user interface looks very pale and confusing and you can only allocate one path for device-initiated scan jobs. This would be to place the files in a particular folder on the host computer or to attach them to an email in Outlook. As well, it doesn't support other email clients for scan-to-email. You can determine how the document should be scanned from the printer but there are two forms already set – A4 document to PDF or 4×6 snapshot to JPEG.

Paper handling

[4]

Paper loading paths in this printer

The paper handling is very similar to some of the other high-end A4-capable PIXMA printers like the direct-connect MP-610 and the fax-enabled network-connectable MX-870 that I previously

reviewed on this site. Here, the printer has a front-loadable tray for A4 plain paper as well as the standard rear-mount paper feed tray. This means that you can keep a reserve of ordinary paper on hand in the printer yet use the back path for glossy paper and other special media.

Also, these printers have a fabulous auto-duplex function that has very little registration problems for double-sided documents and can work "to the edge" as far as margins go. This would put the double-sided printing function beyond satisfying the need to avoid wast and in to a league where you can work on both sides for your desktop-publishing needs.

As well, there is a CD printing attachment that slides in the front but you have to flip down a tray that is deeply hidden there. There isn't any storage for the CD printing attachment so you could then easily lose that part if you occasionally print on CDs.

Printing reliability and quality

The printer is very reliably as far as the mechanism is concerned and could handle large print jobs very easily.

Its document-printing quality is what you would expect for a high-end consumer inkjet unit. When it prints photos, the pictures come out strong on saturation but do lack a bit of definition.

[5]

6 ink tanks in this printer

This is even though it uses a six-colour ink system whereas most inkjets that I have reviewed use either four colours or five colours if they are "photo-rated". Sometimes it may be true that the number of colours in a photo-rated inkjet may not yield particular improvements.

Points of improvement

The printer could benefit from an improved scan-to-PC program which gives the user greater choice on how the image should be handled. As well, it could support the ability to define more than one path for scan-to-PC jobs initiated from the control panel.

As well, Canon could supply high-capacity cartridges for these printers as an extra-cost option so that users are covered if they have a huge run of print jobs from the printer.

Conclusion and Placement Notes

I would recommend this printer as being on my shortlist of printers worth deploying as a home-office or secondary-use (study) multifunction printer for the home if you don't value faxing or email-to-print.

Links
[1]
http://homenetworking01.info/wp-content/uploads/2011/03/2011–03-09–001.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed
[2]
http://homenetworking01.info/wp-content/uploads/2011/03/2011–03-09–006.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed
[3]
http://homenetworking01.info/wp-content/uploads/2011/03/2011–03-09–002.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed
[4]
http://homenetworking01.info/wp-content/uploads/2011/03/2011–03-09–003.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed
[5]
http://homenetworking01.info/wp-content/uploads/2011/03/2011–03-09–004.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed

CEBit 2011

04/03/2011 04:31

The CEBit trade fairs are becoming a bit of a quandery when it comes to being a European launch platform for IT products targeted at the home and small-business user.This is because most of these products appeal as a crossover product between something destined for the householder and something destined for a business owner or manager.

It also cements the fact that products destined for household use like most wireless routers, smartphones and consumer laptop computers will typically end up being used in the shop or small office even though these places will use equipment targeted at business use.

Here, some of these IT product ranges could be launched in Europe at this show whereas others could be launched at the Internationaler Funkaustellung in August.

Main trends

Tablet computers

The core trends that I have observed concerning CEBit 2011 have been the tablet computers. This fair has become another launch platform for manufacturers to promote their new tablet computers which are primarily based on the Android operating platform.

Key improvements for this class have been the use of dual-core processor technology which yields faster performance.

For this class of device, this show has come at the same time

Steve Jobs was premiering the Apple iPad 2 and it shows how competitive the market for tablet computers will be.

CPU/GPU combo processors

The general-purpose computing market has been thrown in to a state of flux with Intel and AMD launching processor platforms based around CPU/GPU combo processors in the form of Sandy Bridge for Intel and APU for AMD. This has changed the ballpark when it comes to integrated graphics solutions with this class of graphics solution yielding graphics performance that is above what is expected.

Similarly, NVIDIA have put forward an ARM-based CPU/GPU combination which would require a different software architecture. This has caused Microsoft to consider releasing the Windows Platform for the ARM architecture as well as for the Intel Architecture.

These processor designs have opened up a new class of computer with "superslim" notebook /laptop computers as well as more of the low-profile ultracompact desktop computers and all-in-ones. The recent work on "dual-mode" graphics where there is a discrete graphics chipset as well as integrated graphics in a computer design has become of benefit when it comes to balancing power economy and performance by allowing the discrete graphics to be seen as an "overdrive".

Network Devices

The main trends here concern LTE wireless broadband as a WAN option for routers as well as speed increases for the popular no-new-wires network technologies. The 802.11n Wi-Fi network had been brought to 450Mbps in the form of a three-stream variant known as N450. The HomePlug powerline network had been brought up to 500Mbps but this is not yet a defined standard until HomePlug AV2 is "set in stone". Still, this show has become a European première for these networking technologies.

It is more so as more European countries have deployed or are deploying next-generation broadband service to homes and businesses across the continent. What with VDSL2 projects occurring in the Germanic countries (Germany and Austria) and parts of the UK as well as various FTTH fibre-optic projects in the UK and France.

Computing Devices

Tablets

Google have released the 3.0 "Honeycomb" version of the Android operating system but have pitched it at the tablet computers rather than at smartphones and tablets. This has come at a time when more manufacturers were releasing tablet computers to the general market.

There are two main screen sizes being released – a 7" size that can be put in a coat pocket as well as a 10" size that is similar to the iPad and most netbook computers.

ASUS had launched their eeePad range of tablets with three notable devices. One is the eeePad Memo which is a 7" screen unit that is driven by a SnapDragon processor and can be operated with a stylus rather than the finger. Another unit of

note has been the eeePad Slider which looks like a smartphone and has the expected functionality but can run on its batteries for 8 hours at a time. As well, ASUS premiered the eeePad Transformer which has a detachable keyboard for those who prefer to type.

There have been a few "budget" tablets that are driven by Android 2.1 rather than 3.0 and are pitched as entry-level e-reader tablets. One 8" model was pitched by AOC and had no integrated wireless-broadband modem and had 4Gb of onboard memory; while there was another 7" unit pitched by Archos in the form of the 70b E-Reader.

Of course, a few "iPad slayers" had been launched at this show. These units which are close to 10" for screen size have features, options and performance statistics that could offer more value than an equivalent iPad.

Fujitsu had released a "Slate" tablet with two cameras and could work with an optional desk docking station so that one could use standard computer peripherals like a keyboard or printer. They also fielded a Windows 7-powered "business-class" tablet PC for the corporate end of the equation.

Now, no tablet computer launch would be without the "Second Japan" (South Korea) putting their weight in with their high-value equipment. LG had launched the G-Slate which is an 8.9" Android 3.0 tablet powered by a dual-core processor, NVIDIA Tegra 2 graphics. This unit has 32Gb on-board, as well 2 cameras that are capable of 5 Megapixels each. Samsung has used this show to launch the Galaxy Tab 10.1. This is a 10" Android 3.0 tablet that uses a dual core CPU and NVIDIA Tegra 2 graphics.

Smartphones

This has also become the time when Google had set the Android 2.3 "Gingerbread" version in stone. As well, there had been talk of Nokia wanting to shift from Symbian to Windows Phone 7 for their smartphone platform.

Dell had put their foot in the market with the Venue Pro which is a Nokia-style smartphone with a slide-down keyboard.

Nokia have premiered two keyboard-enabled touchscreen smartphones in the form of the Nokia N7 and N9, with the latter one being at least Meego driven. They are also wanting to move towards Windows Phone 7 and away from Symbian as the smartphone operating system of choice for their smartphones.

Samsung have taken the chance to première the Galaxy S2, which is the successor to their highly-popular Galaxy S. This smartphone is equipped with a Super AMOLED display and runs Android 2.3.

Desktop and Laptop Computers

The Windows-7 computers become more powerful in their beauty and function. As well, the new combined processors in the form of the Intel Sandy Bridge and the AMD APU systems have opened up new paths when it come to designing desktop and laptop computers. Here, portable computers have been able to perform better than expected for most graphics tasks and are able to do this without a penalty on battery runtime. As well, manufacturers have been able to consider designing desktop computers that are small neat and elegant units yet able to perform remarkably well.

ASUS have released three notebooks that are of note here. One is the eeeSlate EP121 convertible notebook which has a touchscreen and a supplied Bluetooth keyboard. The screen size is 12" and it is powered by an Intel Core i5 processor. Its secondary storage comes in the form of a 64Gb solid-state drive.

They have also released the VX7 15" laptop which may impress regular "Top Gear" viewers. It has sports-car styling and uses dual-mode graphics in the form of NVIDIA GEForce GTX460M for discrete-mode and Intel Sandy Bridge Core i7 processor for integrated mode. As well, they have released a notebook computer which is 19mm thick. Here, I don't have information about its full specifications.

Dell have run with a convertible laptop in the form of the Inspiron Duo. Here, this machine's screen swings in a frame to "filp" from a regular laptop to a tablet computer.

Acer have premiered the iconia which is a dual-display laptop which uses two touchscreens with one as a keyboard. They have also shown the Revo multimedia desktop PC which I would describe as very similar to the slim version of the popular Sony PlayStation 2 games console. As well, Shuttle, a manufacturer of small-form-factor PCs have released a computer that is based H67 "Sandy Bridge" chipset.

Peripherals

The computer display scene has been centred around large-screen HD monitors. One of these is in the form of the ASUS P246Q 24" LCD screen for graphics artists. This one could work in landscape or portrait mode, has an A4 aspect ratio, and a resolution of 1920×1080. For connectivity, this 499-Euro display has the DisplayPort, HDMI, DVI and "VGA" connectors as well as an integrated USB hub.

BenQ have offered a 24" Full-HD LED-backlit LCD display This 300-Euro display has for connectivity 2 HDMI sockets, and a 4 USB hub as well as the usual DVI and VGA connectors but could offer a DisplayPort connector. They also released an "interactive projector" that needs no stylus and allows the user to touch the projected image to interact with it.

Creative have released a few HD-resolution webcams in the form of the Socialize HD which is equipped with auto-focus and available as a "full-HD" (1080) model and an "HD" (720p) model/They have also released the "Cam Chat HD" which doesn't have auto-focus but works at HD (720p).

Every technology trade show will come up with the usual line of peripherals and gadgets that may not appeal to the serious computer buyer but appeal to the computing press as sidelines. One is that Fujitsu had released a regular computer mouse that

was to "appeal" to the green thought by having it made out of renewable materials. In my opinion, this wasn't anything special as far as pointing devices go.

SAGEM had released a cordless phone which reminded me of one that was released in the late 1970s by a mail-order firm in America. Here, the battery-powered cordless phone was designed like a standard corded desk telephone yet it transmitted via radio to a "black-box" base station that was connected to the telephone service. It was initially modelled on the standard-issue dial telephone of the day but was revised to look like the standard-issue pushbutton phone of that same era. The cordless phone offered by SAGEM and known as the "Grundig Sixty" was styled like a dial-equipped desk telephone that was standard-issue in Germany in the late 1960s except that this DECT-connected phone uses pushbutton dialling and is finished in that orange colour reminiscent of the era.

The network

For the network, this has become a European launch pad for N450 (three-stream 802.11n that runs at 450Mbps maximum) Wi-Fi equipment as well as 500Mbps HomePlug AV equipment.

AVM, the German network-hardware name have become an example of this with their FritzBox routers have been conservative with their N-based WiFi speeds by offering N300 for their Wi-Fi networks rather than running for the N450 three-stream technology. One of these is the FritzBox 6840 which has LTE wireless-broadband on the WAN side and one Ethernet as well as Wi-Fi N-300 on the LAN side. Like most of the other FritzBox routers, it has VoIP telephony interfaces through 1 telephone socket and a base station for 6 DECT handsets. As well, it has a USB socket for sharing peripherals as well as being a DLNA media server.

They also premiered the Fritzbox Fon WLAN 7330 which has ADSL2 on the WAN side and Gigabit Ethernet as well as Wi-Fi N300 on the LAN side. This would have the USB port and DLNA media server function as well as a VoIP endpoint for 1 regular handset and 6 DECT handsets.

They also released a companion DECT cordless handset for these routers which looks as though it is a low-tier camera-equipped mobile phone. Here, this would use a colour LCD display and a graphic user interface for its management and use; and is pitched as an Internet audio endpoint.

Of course, they have released a HomePlug AV 500Mbps set with two HomePlug-AV – Gigabit-Ethernet bridges for the European market.

TP-Link have started to push in to the European market as far as their HomePlug products are concerned, This is with them premiering an energy-saving HomePlug AV network bridge with power connector so you don't lose your power outlet when you plug in the HomePlug.

Conclusion

The CEBit 2011 trade fair is the first such fair for an interesting year in information technology, what with combo CPU/GPU chips, higher network speeds and increased interest in the touch-driven user interface.

Understanding the new Thunderbolt peripheral-connection technology

02/03/2011 05:19

Another of the new technologies that Intel has been promoting alongside its "Sandy Bridge" processor architecture has been the "Thunderbolt" peripheral connector.

Capabilities

This connector has a current raw transfer speed of 10Gbps but could have a theoretical maximum is 40Gbps (20Gbps up and 20Gbps down) when both pairs of wires are used. You can use this same "pipe" to pass a DisplayPort-based audio-video stream for a display as well as PCI-Express-based data stream.

There is the ability to daisy-chain 7 Thunderbolt-connected devices but you can have less than 3 metres between the devices at the moment.

Thunderbolt at the moment

This technology will complement USB and other connection technologies but will be like what happened with USB in the mid-90s. This means that it will be an Apple-only technology and this will appear on the latest run of MacBook Pro laptops.

It will appear on PC-based computers in early next year. As far as retrofit opportunities go, Intel had mentioned that it could be available for new motherboards but there was nothing much said about availability as an add-in expansion card.

The main peripheral applications would be external storage subsystems like the LaCie "Little Big Disk" storage array; as well as displays. Such peripherals that have this connection will typically be marketed as being "Thunderbolt-ready".

What could it offer

Another storage-expansion connection for computing devices

One key application would be to provide a high-bandwidth direct connection between computer devices and one or more external hard-disk storage subsystems. The reason I use the term "computer devices" is because such devices could encompass PVRs which could benefit from capacity expansion, routers and network devices that convert attached external hard-disk subsystems to network-attached storage; as well as the general-purpose computers.

Multifunction devices that are fit for the new generation of compact high-performance computers

There is the possibility for one to exploit the Thunderbolt concept to design a multifunction desktop console unit. Here, this unit could house a screen, audio subsystem, video camera, removable storage such as an optical drive or SDXC card reader and/or a USB hub. Another variant could house a keyboard instead of a screen and connect to one or more external displays using DisplayPort or regular monitor connectors.

This display unit would be connected to an ultracompact system unit that has only the processor, RAM, graphics-processor, network connectivity and a hard disk, plus some USB sockets for a desktop application. On the other hand, this display could serve as a "desktop display" for a subnotebook or ultraportable computer. The USB hub would come in handy for connecting keyboards, mice, USB memory keys and similar devices.

Here, these multifunction devices can be designed so that they are no "second-class citizen" because they have multiple functions. This means they could render the multiple video streams as well as support the high-capacity removable storage technologies like Blu-Ray Disc or SDXC cards.

This is more so as the Intel Sandy Bridge technology makes it feasible for small computers like book-sized ultracompact desktops and notebooks of the "subnotebook" or "ultraportable" class to "have all the fruit" as far as performance goes.

Issues that may be of concern

One main issue that I would have about the Thunderbolt technology is that Intel could limit it to computer applications that are centred around its chipsets. This would make it harder for competing processor designers like AMD or NVidia to implement the technology in their chipset designs. It would also place the same implementation limits on system designers who want to use chipsets that offer improved performance or better value for money alongside Intel processors on their motherboards.

This is like the Intel Wireless Display technology which allows a special display adaptor to connect to an Intel-based laptop computer via a WiFi wireless network and show the pictures on the attached display device. Here, this functionality could only work with computers that have certain Intel chipsets and couldn't be retroactively applied to older computers.

Another issue would be to encourage implementation in "embedded" and dedicated-purpose devices like PVRs and routers as well as the general-purpose computers. For some applications like the previously-mentioned storage-expansion application, this could add value and longer service life to these devices.

Conclusion

Once the Thunderbolt technology is implemented in a competitive manner, it could open up a new class of devices and applications for the computing world by making proper use of the "big fat pipe" that it offers.

The printer-initiated scan-to-computer feature for network applications could be standardised and implemented at operating-system level

01/03/2011 07:24

Most, if not all of the network-capable all-in-one printers that I have reviewed on this site have support for network-based scanning. This includes the ability to start a scan job from the printer's control surface and have the job sent to the computer and handled in a preferred way. But this function isn't handled in a smooth and reliable manner as judging from my experience when connecting the many different printers to my computer.

The current situation

This function is typically managed by a manufacturer-supplied "scan-monitor" program that is part of the "printer solutions package" and has to be up and running before you start your scan job from the device.

What can typically happen is that this functionality can end up being dependent on the way this "scan-monitor" program behaves. Here, you may end up not being able to scan via the network or not being able to start the scan job at the printer's control surface. In some cases, you may be able to use the operating system's scanning infrastructure such as Windows Image Acquisition, rather than the manufacturer's scan tools to do a scan job,

Why integrate device-initiated scanning for networked hardware in to the operating system

The operating systems could support device-initiated scanning by offering functionality like "scan paths" that are available to each of the devices. Here, the devices could then expose the "scan paths" that are available to them based on their capabilities like colour scanning, automatic document feeder, etc. This means that if two scanners have the same capabilities, they have the same scan pathos for each computer endpoint.

Multiple-machine environments

This could include the ability to identify a particular computer as a destination for the scanned files; as well as allowing applications rather than the manufacturer's particular applications to be the endpoints. This could allow for applications like OCR, bookkeeping, raster-to-vector and others to simply become "available" at the printer's control panel rather than having to work the application's user interface or find image files left by the scan monitor in order to benefit from the scanned work.

Here, it may cater for realities associated with the home or small-business network where there are many computers and, in some cases, two or more multifunction printers. This may be brought on by the use of a premium-level machine with all the bells and whistles like the HP Photosmart Premium Fax C410a or the Canon PiXMA MX-870 being installed in the home office and an economy-level machine like the HP B110a Wireless-E installed in the study, kitchen or bungalow and used as a "second" printer.

Efficient operation

Another obvious benefit of the scan-monitor function being integrated in the operating system is that it works in an efficient manner. This will free up memory and other resources and allow for a quick response from the destination computer. This is compared to a significant time delay occurring when one instigates a scan job from the multifunction printer's control surface as the scan monitor starts up and handles the scan job.

Points of innovation

The operating system working as a scan monitor can open up paths of innovation when it comes to imaging-driven applications. An example of this could include the use of the multifunction printer's control surface for entering job-specific information. This is more so as these multifunction printers come equipped with D-pad, numeric keypads and touchscreens; as well as graphical screens and menu-driven operation. Applications of this could include entering the file name for "scan-to-file" operations, determining the nature and amount of an expense when scanning receipts in to a bookkeeping program or entering photograph-specific information when scanning a photograph.

It can also open up another path of innovation in having network-attached-storage devices become scan destinations without the need to remember FTP or other file-path locations for these devices. This can help with activities like archiving of paper documents or scanning of pictures to be made available on the DLNA Home Media Network.

Conclusion

Once we move the workload of device-initiated scanning to the Windows, Macintosh or Linux operating system, it can then yield many improvements to people who scan hard-copy material using the current crop of multifunction printers.