Product Review–Pioneer NAC-3 Internet audio system with 2 iPod Docks

28/01/2011 15:23

Introduction

I am reviewing the Pioneer NAC-3 (XW-NAC3) Internet music system with 2 iPod docks. This DLNA-enabled network media unit is a flagship model that heads a series of iPod speaker docks that Pioneer has recently released and is the latest attempt by this company to sell “small-set” audio equipment like portable, clock and table radios.

This Japanese company has always been known for high-quality home audio /video equipment since the 1960s and car audio equipment since the 1970s but has dabbled in the highly-competitive product class at various times through the 70s and 80s, initially selling these goods under the “Centrex” brand in some markets but eventually simply selling them under their own brand. This unit is an example of how Pioneer, along with the other Japanese consumer-electronics companies are trying to get their claws back in to a very competitive product class which is awash with many cheap Chinese-built products that are sold under many different brand names.

As an echo to the earlier attempts in the “small-set” audio product class, this unit has functionality that makes it stand out from the pack. One party piece is to work with 2 iPod or iPhone devices and play tracks from one or both of the devices and another one is to properly implement “three-box” DLNA Network Media functionality where it can be managed by a Windows 7 computer or other DLNA control point.

It will also be the first time I have reviewed a network media device and am implementing these “at-a-glance” tables for this class of device. Regular readers may have noticed that I am implementing these “at a glance” tables when I review laptop computers and printers so people can see the basic facts about these products before they read the review text.

[1]

Price

Recommended Retail Price: AUD$699

Functions

Internet Radio vTuner Network Media DLNA 3-box DLNA functionality Controlled Playback Device
- Content Selection
- Audio Content Playback
- Volume Adjustment (Network media) Local Stored Memory USB iPod /iPhone 2 iPhone docks

Connections

Input Audio Line input 1 x 3.5mm stereo jack **Output** Video Line output 1 x composite RCA jack **Network** Ethernet Standard 100BaseT Ethernet

Speakers and Sound Output

Output Power 10 Watts RMS per channel
(8 ohms, 10% THD) 2 channels (stereo) **Speaker Layout** 2.0 stereo layout 2 x 3” (6.6cm) Full-range
2 x 3” (7.6cm) Passive radiator

The unit itself

[2]

Card-type remote control

This unit has been designed to appeal to the young generation who just want something new rather than your “father’s old station-wagon”. Here, it has a shape that is similar to a banana and is finished in a glossy-white plastic cabinet. It can come with three different speaker-cloth colours – burgundy-red, black or white. As well, it comes with a card-size infrared remote control which you have to use for operating most functions including access to Internet radio.

This unit can play music from 2 iPod or iPhone devices; a Bluetooth A2DP-compliant audio source, a USB Mass-Storage Device or a line-level source as well as material over the network. But this set lacks some functions that I have been used to with most Internet radio units that I have reviewed previously on this site.

One function that it misses is the ability to connect to the host network via Wi-Fi wireless. Here, you have to connect it to the network using an Ethernet cable, but you could use a HomePlug kit or a Wi-Fi-Ethernet client bridge to connect it to the home network and want “around-the-home” flexibility without needing to lay Ethernet wiring. The other function that it lacks is access to regular broadcast radio, whether FM or DAB+ digital radio. This may not be of concern if you are seeing this unit as an Internet-enabled complementary radio /network music terminal /iPod speaker doc while you use your ordinary radio (which most households have plenty of) for listening to regular local broadcast radio.

iPod playback

[3]

You can play and charge two iPods or iPhones here

The ability to play and charge 2 iPod or iPhone devices is useful for quite a few applications. For example, a person who has one of those high-capacity “iPod Classic” series devices can still use this device as a “jukebox” alongside their new iPhone 4 that they have just signed a contract for. This is infact the demonstration setup that I used with an iPod Classic and an iPhone that I had borrowed from a teenage boy that is living with me. Similarly, a household with many “iDevices” can this as a charging station for two of these devices. The two-iPod function is augmented by a dual-device shuffle mode which plays tracks from each of these devices sequentially. The iDevices can even be put in to “shuffle” mode so as to allow the unit to randomly pick music across the devices.

Bluetooth A2DP

The system can also work with Bluetooth A2DP audio sources like a lot of mobile phones, tablet computer (including the iPad) or some MP3 players. Here, this worked as a “Bluetooth speaker” for my Nokia N85 mobile phone and had worked as expected. The track navigation and PLAY/PAUSE buttons on the remote control had controlled the music playback on my phone.

The pairing experience was a bit confusing because there was one procedure to set up the paring code but this didn’t make the unit “open for pairing”. You actually had to press the PLAY button on the remote control to achieve this goal and begin the pairing process.

Network functionality

All the media available via the home network connection is accessed when you select “Home Media Gallery” as the function source. This includes the Internet radio as well as music files available from any of the DLNA Home Media servers on your network.

Internet radio

The Internet radio works from the vTuner Internet-radio directory and has the similar directory structure to all of the other radios that I have reviewed. It has the ability to store 30 Internet-radio stations with 10 stations in three “classes”. You will have to use this function once you regularly listen to particular Internet-radio stations because if the set loses connection with the station, you will need to “retune” to that station.

It can handle jitter and latency situations OK but as I have said before, it goes to the “Home Media Gallery” menu once it drops out and loses the connection. This can happen at busy times when the Internet service is oversubscribed and there isn’t proper QoS functionality on the network between the radio station’s server and this set.

DLNA network media

This unit integrates properly with the DLNA Home Media Network. Here, it will work as a network music player where you select your content using the NAC-3’s display and remote control; and it will even list the UPnP AV /DLNA Media Servers that exist on your network when you select the “Home Media Gallery” function so you can start “delving” in to the content on your desired server.

It also works properly as a network-controlled music player when you use a UPnP AV /DLNA control point program like Windows Media Player 12 (Windows 7) or a mobile phone with a DLNA media control program. I have even tried this with my Nokia N85 phone which I use as a personal “Walkman” and have “pushed” music held on the phone to this unit via the home network. As well, unlike some DLNA-compliant media players that are meant to work under network control that I have used, this unit will even play a program of music that you direct it to play from the network-based control device.

Sound Adjustments and Quality

There are bass and treble controls accessible from the remote control but I had kept the bass and treble set at “flat” so as to hear a sound that I can assess fairly. There is a “sound-effect” button which allows the system to be switched between a “vivid” mode with a bit of extra bass and treble, a “Lo-Fi” mode which yields a cheap transistor-radio sound and an “ALC” mode which keeps the sound level constant for use in noisy environments.

Even if I don’t use the sound-effect modes and I have the bass and treble flat, this Internet radio doesn’t sound like a “gutless wonder”. There is still some punchy bass even with popular music that was recorded before there was the desire to make such music sound boomier and louder. Yet you still hear the vocals and instruments that carry the body of the music clearly and distinctly. Even the heavy bass lines from the recent dance tracks that were on the iPod and iPhone that I borrowed from the teenager to try out the dual-iPod functionality didn’t worry this music system much and they still sounded “tight” – there wasn’t that old bass-heavy “jukebox” sound.

Limitations and Points of Improvement

The Pioneer NAC-3 Internet music system could benefit from integrated Wi-Fi wireless-network or HomePlug powerline network connectivity. This is more so because it is the kind of network device that appeals to being taken around the house from room to room.

It could also benefit from a headphone jack because some people use this jack to connect a more-powerful active-speaker system or an amplifier to these devices for increased sound output. As well, the VIDEO output on this unit could be used not just for iPods and iPhones that have a video output. Here, this jack could work with the DLNA network media player to play pictures and video material through a connected TV set.

The Internet radio functionality could have some improvements in the way it operates. It could come back to the “last-tuned” Internet station or attempt to reconnect itself after a dropout. But this may have to be facilitated through a separate “Internet Radio” function on the function selector like what most other Internet radios have.

Conclusion

I would recommend this unit for people who either run two or more iPods or iPhones; a Bluetooth-enabled music-capable phone or have established a DLNA Home Media Network and want a “complementary” transportable device that can get the most out of their digital music library available on their portable devices or home network.

Links
[1] http://homenetworking01.info/wp-content/uploads/2011/01/2011–01-26–001.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed
[2] http://homenetworking01.info/wp-content/uploads/2011/01/2011–01-29–002-Copy.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed
[3] http://homenetworking01.info/wp-content/uploads/2011/01/2011–01-26–002.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed

What is the “new computing environment” and how to go about it?

28/01/2011 03:34

When I talk of laptops, wireless routers and network-capable printers, I make frequent references to a “new computing environment” that these devices can enable.

What is the “New Computing Environment”

[1]The “New Computing Environment” is a home computing environment that is based around portability and flexibility. The seed for this environment has been sown with the widely-publicised Intel Centrino campaign and is becoming stronger in a lot of households.

It consists of most of the computers in the house being laptop or notebook computers.It may also include the use of “all-in-one” desktop computers similar to the newer Apple iMacs or HP TouchSmart desktops. The goal is that these computers are able to be moved easily around the house at a whim.

This environment will also encompass the use of smartphones and tablet computers for secondary computing activities like casual Web browsing, email and use of social networks.

There is a Wi-Fi home network in place that is served by at least a wireless router that is the network’s Internet “edge”. The computers may connect to that router via Ethernet if they are close to it but are typically connected to that router using the Wi-Fi network segment.

What does this lead to

Increased flexibility

The key benefit is to increase flexibility when it comes to computer use. The major benefit is that you can relocate the computer as you need it. An example that was portrayed in an Intel Centrino radio ad that was played in the UK was someone who was writing out an email on a laptop being being interrupted by another household member who had come in to do the vacuuming. Then they are able to move somewhere quieter to do the rest of their work.

[2]

Netgear DG834G ADSL2 wireless router

As well, the "New Computing Environment" also leads to increased "casual computing" setups like viewing sites like YouTube or Facebook while lounging around on the sofa; going through one's email while relaxing in bed or flicking through online news sites while in the kitchen. I even wrote a short article[3] on this site about the trend of young people visiting Websites while watching TV.

Catering to temporary workspaces

Another very common scenario is a household without a dedicated workspace. This is where the kitchen bench or the dining table becomes a temporary office. Some households may have a collapsible table like a card table or trestle table along with one or more folding chairs, set up in a lounge area or landing for use as a temporary workspace; or may have such furniture on hand to set up a temporary workspace as required. The "New Computing Environment" allows the user to shift the computer along with the rest of their work whenever they need to do something like set the table for a meal.

Even if a household has a dedicated workspace, there will always be the need to create another temporary workspace to suit another person's work or study needs or to suit a different type of work.

Storage flexibility

Similarly, laptop computers are much easier to store when not in use. For example, they can be put in a drawer when not needed, as I have mentioned in an older article regarding use of a laptop as a kitchen PC. This allows the machine to be well out of harm's way which can be of concern in a busy household or with some children and pets.

As well, the laptop is also more suited to households who have older "davenport" or "roll-top" desks which are capable of being closed up when not in use. Here, these computers can be used at and stored easily in these desks. It also allows these desks to become the elegant piece of furniture that they are known for.

Suitability with "downsized living"

This computing environment is becoming increasingly relevant with people who live in smaller houses and apartments; especially city apartments.

This class of user includes "empty-nest" parents who are moving to smaller premises because their children have left the family home, but still need to be able to look after their grandchildren when they come around. Here, their computing equipment doesn't need to cause much space to be taken up in these smaller living quarters.

The "home-business" laptop

This kind of computing environment also suits the use of a "home-business" computer that is used at home but taken to the workplace while you are working. For some small-business operators, a large laptop like the Dell Inspiron 15R[4] or the HP Probook 4520s[5] may be the only computing device that they need to use for all their computing needs and you just pack this machine in the boot (trunk) of your car before you head to or from your workplace.

Implementation notes

Starting out

You will need to use a laptop computer that is commensurate to your computing needs. But it will have to be equipped with an integrated Wi-Fi wireless network interface of at least 802.11g WPA standard. This covers most laptops made over the past five years. I have reviewed plenty of laptops and notebooks on this site and will be reviewing more of them as they come along from different manufacturers. You can have a look at the list of equipment reviewed here on this page[6].

[7]

Compaq Presario CQ42 entry-level laptop

If you are intending to buy a new laptop computer, I would suggest that you look at the buyer's guides that I have written – " Buying a Laptop or Notebook Computer[8]". Here, I have suggested the use of the 15" laptop computers as a sole or main computing device for this environment. If you have very basic needs like emailing and basic Web surfing, a unit equipped with a low-end processor and around 2Gb memory, like the Compaq Presario CQ42 that I have reviewed here[9], can suit your needs here. It is still worth it to spend as much as you can afford on the hard disk capacity because as you use the computer more regularly, you will end up filling the hard disk more quickly.

On the other hand, you may want to use an "all-in-one" desktop computer like one of the Apple iMac, HP TouchSmart Desktop or Sony VAIO J or L Series computers. These have the computing power, secondary storage and the screen integrated in one slim lightweight housing, with a separate keyboard and mouse. They may be useful as a "common" or "family" computer and can be stored or moved easily as long as you know how to reconnect the keyboard and mouse.

Printers

A lot of people who set up for the "new computing environment" typically use a direct-connected printer and bring the laptop closer to it in order to plug it in when they want to print or scan something.

[10]

Canon PIXMA MX-350 network multifunction printer

What you need to do for proper implementation is to use a network-enabled printer. Here, these printers connect directly to the network either via Ethernet or Wi-Fi wireless and accept their print jobs through this connection. Multi-function printers can also expose their other functions like the scanner, fax or memory-card slots to the network.

This avoids the need to connect the laptop to the printer every time you want to print something out. With a network printer, you just select that printer from the list of printers when you specify a print job from your laptop and, moments later. you will find your print job in the printer's output tray. Here, the job is sent via the network to the printer rather than via a cable that you always connect to the printer.

"Easing the gap" towards flexibility

Some users who are used to a regular laptop computer connected by Ethernet to a single-port broadband modem at a regular workspace may still get in to the habit of connecting the laptop to the wireless router using the "old way". This is more so if they see their computer's home location as being on the desktop near the router and while at that location they plug it in to the Ethernet socket on the router.

Some operating systems may react in a strange way if the user plugs in the Ethernet connection while the wireless connection is still active. This may be not of concern with newer operating systems that can automatically deactivate the Wi-Fi wireless network interface if the computer is connected to the network via an Ethernet cable. Here, the user needs to know how to manually enable and disable the Wi-Fi wireless network interface in the laptop.

Some of the computers will use a separate "Wi-Fi" button to turn the Wi-Fi modem on an off whereas more recent examples will require you to press the "Fn" key and a function key with a transmitter symbol to turn the wireless network on and off. This function may also be known as a "flight mode" and in some cases, will turn the Bluetooth function on and off at the same time.

Then what you might end up doing is to forget using the Ethernet cord and just use the laptop wirelessly as you realise you can use the Internet at home without wires.

Network-attached storage devices

If you are considering expanded or secondary data storage space for the "New Computing Environment", you will be interested in buying a network-attached storage device. This is a dedicated external hard disk that is accessible from computers connected to your network. It is different to the idea of repurposing an old desktop computer as a shared storage server because the device is designed specifically to be a storage device and will end up being quieter, more efficient and more reliable to run than the old desktop computer.

They are relevant as a backup device; to offload rarely-touched data from your computer and/or to works as a standards-compliant media server for your music, digital pictures and videos. I have touched on this latter application in the DLNA Home Media Network series article: "Setting up for PC-free operation[11]".

An increasing number of wireless routers are offering NAS functionality when a USB hard disk is plugged in to them. This may be good for starting out or a temporary network-storage solution but a dedicated network-attached storage device can do the job much better for long-term use. As well, most of the routers that offer this function are very under-powered when it comes to handling USB hard disks and you would then have to use a self-powered USB hard disk or connect the "power" USB connection on small USB-powered hard disks to a powered USB hub.

Is wired technology relevant to the New Computing Environment

There are some cases where wired-networking technology is relevant to the New Computing Environment. One main case would be to support network printers or networked AV devices that don't have integrated Wi-Fi functionality. This would be more so as you consider purchasing an Internet-enabled TV or Blu-ray player for your home and a lot of these devices may just have an Ethernet socket rather than Wi-Fi connectivity.

Another case would be to use a secondary access point to extend wireless-network coverage, such as with buildings that use thick walls made of brick, stone or similar materials; large buildings or outbuildings on a property.

Here, you may think that you have to lay Ethernet wiring through the premises and this may be expensive and of poor value if you aren't renovating, extending or rewiring your building. In most cases, you could use HomePlug AV technology as your wired "no-new-wires" technology because this uses regular AC wiring as a data carrier.

Conclusion

What I am hoping to do with this is to explain the "New Computing Environment" that is becoming a major trend as far as home and small-business computing is concerned. This is where the computing environment is centred around the use of portable computers that connect to a wireless network.

Links

[1] http://homenetworking01.info/wp-content/uploads/2010/08/2010–08-20–001.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] /2010/08/surfing-the-net-while-watching-tv-now-the-thing-amongst-the-young/#utm_source=feed&utm_medium=feed&utm_campaign=feed

[4] /2010/12/product-reviewdell-inspiron-15r-consumer-laptop/#utm_source=feed&utm_medium=feed&utm_campaign=feed

[5] /2010/05/product-review-hewlett-packard-probook-4520s/#utm_source=feed&utm_medium=feed&utm_campaign=feed

[6] /article-collections/product-reviews/laptop-notebook-and-netbook-computers/#utm_source=feed&utm_medium=feed&utm_campaign=feed

[7] http://homenetworking01.info/wp-content/uploads/2010/06/2010–06-23–001.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed

[8] /2010/10/buyers-guide-buying-a-laptop-or-notebook-computer/#utm_source=feed&utm_medium=feed&utm_campaign=feed

[9] /2010/06/product-review-compaq-presario-cq42-notebook-computer/#utm_source=feed&utm_medium=feed&utm_campaign=feed

[10] http://homenetworking01.info/wp-content/uploads/2010/06/2010–06-18–002.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed

[11] /2008/12/feature-article-dlna-network-media-series-setting-up-pc-less-networked-av/#utm_source=feed&utm_medium=feed&utm_campaign=feed

"Wi-Fi-ready" consumer electronics–what should you know

27/01/2011 03:38

Article

Why you should avoid proprietary Wi-Fi dongles | Crave – CNET [1]

My comments

Previously, I had written an article about using HomePlug to connect a TiVo device to your home network if you don't have Ethernet connectivity near the TiVo device. This was after I had seen poor Wi-Fi performance from the TiVo-specified 802.11g Wi-Fi adaptor that a TiVo that was on show at

a consumer-electronics show was connected to. This is infact the beginning of a trend by consumer-electronics manufacturers to differentiate their product ranges.

What does it mean if consumer-electronics is "Wi-Fi-ready"

Consumer-electronics manufacturers will place a range of network-enabled consumer-electronics products like flatscreen TVs or Blu-Ray players as "Wi-Fi-ready" or "Wi-Fi-enabled" units. These units will be cheaper than the products that have Wi-Fi functionality integrated in them and this fact is used as a way of differentiating between particular models or ranges.

When you want to use the "Wi-Fi-ready" TV or Blu-Ray player on your home network's Wi-Fi segment, you have to buy a special Wi-Fi network-adaptor module from the consumer-electronics manufacturer through their retail front. Most such adaptor modules will come in the form of a USB "dongle" that plugs in to a specified USB socket on the device but some manufacturers may require that their technicians install the module in the set for you. This latter practice may be more so with TVs sold by some European manufacturers who are used to having add-on functionality modules available for installation by their technicians at a later date upon their customers' request.

Of course, nearly all of these items of consumer electronics will have an Ethernet socket on them so you can connect them to an Ethernet network segment or a HomePlug networks segment with the appropriate bridge device.

The Wi-Fi dongles or modules

The dongles or modules are usually peculiar to a manufacturer's products or may only work with a certain subset of their products such as those that are based on a particular design. They usually cost more than a USB-Wi-Fi network adaptor sold for general-purpose computers. As well, the modules, especially the dongles, may not give the same kind of Wi-Fi performance as a setup where the Wi-Fi functionality is integrated in the device.

It may also be worth paying attention to the price difference for the model that comes with Wi-Fi and the model that is "Wi-Fi-ready". If the device of concern is a TV set, I would suggest that you compare the two models that have the same screen size and display technology. It is also worth asking if the retailer does sell the Wi-Fi module and how much for. This is because in some cases, the aforementioned price difference at the store may be less than the cost of buying this module.

What can you do with a "Wi-Fi-ready" device if you don't have Ethernet at its location?

This same situation can also hold true if you wish to go for the cheaper "Wi-Fi-ready" model yet integrate it in to the home network in a "no-new-wires" manner.

I would suggest that you use a HomePlug AV setup to connect the "Wi-Fi-ready" device to the home network if you don't have an Ethernet connection in place at the device's location. This also includes situations where you may move the device to a newer location such as "pushing" the existing Internet-enabled "Wi-Fi-ready" TV to the secondary lounge area or bedroom.

Most of the HomePlug AV starter kits which comprise of two HomePlug AV-Ethernet bridges (a.k.a "homeplugs") can typically cost the same as the add-on Wi-Fi adaptors. It is also worth knowing that if you pay a bit more, some of these kits even come with an integrated Ethernet switch which may be useful if you have two or three network-enabled video peripherals near the TV or are likely to connect the PS3 or Xbox 360 to the TV.

Other comments

One situation that I would fear most with consumer-electronics would be to use the optional Wi-Fi module technique used in the current crop of "Wi-Fi-ready" equipment to provide network /Internet connectivity to cheaper equipment at extra cost to the consumer.

Here, the equipment would have no Ethernet socket yet still show "network-function" teasers in its user interface and describe the functions in its user manual and marketing literature. But the user would have to buy a Wi-Fi or Ethernet module in order to link the device to the home network before they benefit from network and Internet functionality.

Like with the Wi-Fi-ready scenario, the user wouldn't be able to use cheaper or better-value hardware to network-enable their device, therefore end up paying the premium for network connectivity.

Links
[1] http://news.cnet.com/8301-17938_105-20029315–1.html?tag=nl.e702

VDSL now in Havelland, Germany–Let's not forget small communities outside large urban areas

26/01/2011 06:42

Articles

DNS:NET bringt VDSL ins Havelland | VDSL-News (Germany – German language)[1]

My Comments

Comments relating to an experience with an ADSL service in a country district outside an urban area

Even a country district outside of a well-serviced metropolitan area can suffer limitations with communications. This can happen where you have "green wedges", farming districts (e.g. wine districts at Yarra Valley or Rosebud) or "beauty districts" (e.g. The Dandenong Ranges in Melbourne or the Blue Mountains in Sydney) located on the edge of or as "pockets" in a metropolitan area and many small communities exist through these areas.

Take Yarra Glen, which is located in the Yarra Valley Wine District outside of Melbourne, for example. You could get the radio and TV programmes receivable in the Melbourne metropolitan area very easily but you can end up with a telephone system that is allowed to "go rotten".

This was exemplified when I saw a friend of mine who was living in the town and she had trouble with her ADSL Internet service. She had an ADSL modem but it appeared that there was no ADSL signal after she had the service for a few years. The service provider suggested that she try out another modem and she bought a wireless ADSL router and this unit wouldn't show the existence of ADSL service.

After many troubleshooting hours on the telephone to the service provider and the wireless router's manufacturer, we found that the telephone infrastructure had "gone rotten" as far as proper ADSL service was concerned. The service provider had come back with information that a lot of repair work needed to be done at the exchange (where the DSLAM was) and at a lot of wiring points between the exchange and her location. This then allowed the router to register proper service and the service had yielded significant improvement since the repairs were done.

I have been following the issue of country areas being set up with decent-standard broadband service and even hamlets, villages and small towns that exist outside a metropolitan area need to be considered.

Comments and notes on the Havelland VDSL deployment

This VDSL2 deployment is taking place in the Brandenburg-Land (German Federal State) outside the Berlin metropolitan area. For Australian readers, this may be similar to a deployment that takes place in a state like South Australia but isn't servicing the Adelaide metropolitan area. It is in the Havelland district which is between Brandenburg town and west of the Berlin metropolitan area.

There are two main deployments in this area – one in Seeburg which will have a fibre backbone and one covering Elstal (Wustermark) and Falkirk which will have a radio backbone. Each deployment will use the VDSL2 technology to bring the next-generation broadband to the customer's door and this technology has been valued due to less need to lay out new infrastructure to the door.

DNS:NET, who are behind this project, are working on extending its next-generation broadband infrastructure to bring this calibre of service to the small Brandenburg communities.

Conclusion

The reason I was citing the Yarra Glen poor-quality ADSL incident is that small communities that exist just outside major urban areas are at risk of being neglected when it comes to providing proper broadband service. I was citing this in conjunction to the Havelland VDSL deployments because DNS:NET were working on small communities outside the Berlin and Brandenburg conurbation by making sure they have real next-generation broadband service.

It also caters for the reality that as urban sprawl occurs, these communities will end up becoming part of that urban area and their transport and communication infrastructure needs to be taken care of.

Links
[1] http://www.vdsl-tarifvergleich.de/vdsl-news/dnsnet-vdsl-havelland/

Mobile Users Becoming More Susceptible to Phishing Scams

22/01/2011 02:59

Article

Mobile Users More Susceptible to Phishing Scams – www.enterprisemobiletoday.com[1]

My comments

Why are mobile (smartphone and tablet-computer) users more susceptible to phishing scams?

The main reason is that the operating interface on the mobile computing devices is totally different to the operating environment on a desktop or laptop computer.

One main reason is that most of these devices don't have a large display area in their Web browsers or email clients due to them having smaller display screens. This leads to the software designers designing a "clean and simple" user-interface for software pitched at these devices with minimal controls on the interface; which eliminates such concepts as fully-qualified email addresses and URLs. A lot of these devices even conceal the address bar where the user enters the URL of the page to be visited unless the user directly enters a URL that they intend to visit. Similarly, the email client only shows the display name for the incoming email, especially in the commonly-used "list-view".

It is also augmented by the lack of a "B-option" interface in a mobile operating system. This is compared to what is accepted in a desktop operating environment with functions like right-clicking with a multi-button mouse or using Ctrl-Click on a single-button-mouse-equipped Macintosh to gain access to a context-sensitive secondary menu. Similarly, all scientific calculators used an [F] key and /or an [INV] key to modify the function of formula buttons either to gain access to the inverse of a formula or obtain another formula.

Such an option would allow the user to select a "function" button before selecting the option or displayed item in order to open a context-sensitive secondary-function menu or select a secondary function.

This discourages users from checking the URL they intend to click on in an email or the fully-qualified email address for an incoming email.

What could be done?

The Web browser and email client could support "phish detection" which could provide a highly-visible warning that one is heading to a "phishy" Web site or receiving a suspicious email. This function is just about provided in every desktop email client that most of us use but could be implemented in a mobile email client. Similarly, an email service could integrate filtering for phishy emails as part of its value-added spam-filter service.

There could even be the ability to have a "magnifying glass" touch button on the browser or email-client user interface which,

when selected before you select an email address or URL, would show the fully-qualified email address or URL as a “pop-up”. This would have the domain name emphasised or written in a distinct colour so you know where you are going. This same interface could also be in place if one enters a URL directly in to their Web browser.

The mobile browsers could also support the Enhanced Validation SSL functionality through the use of a distinct graphic for the fully-validated sites. As well, a wireless-broadband provider or Wi-Fi hotspot could offer a “phish-verify” proxy service so that users can see a “red flag” if they attempt to visit a phishy Website similar to what happens in Internet Explorer when a user visits a suspicious Website. This is similar to how some mobile providers warn that you are heading to a website that isn’t part of their “free-use” Website list and they could integrate this logic in to these proxy servers.

Conclusion

In general, the industry needs to look at the various user scenarios that are or are likely to be in place to improve secure Web browsing and email. Then they have to enable user-experience measure that can allow the user to verify the authenticity of Websites and emails.

This is more so as the small screens end handheld devices end up as the principal Web user interface for people who are on the move. It will also become more so as the “10-foot” TV interface, with its large screen with large text and graphics, D-pad navigation technique and use by relaxed and mostly-tired viewers relaxing on comfortable furniture becomes a mainstream “lounge-room” interface for the Web.

Links
[1] http://www.enterprisemobiletoday.com/features/article.php/3920491/Mobile-Users-More-Susceptible-to-Phishing-Scams.htm

£98–The price to break the digital divide in the UK

21/01/2011 08:43

News Articles

BBC News – £98 PCs target UK digital divide[1]

Race Online 2012 to bring sub-£100 PC’s to market | ThnikBroadband.com (UK)[2]

Web site

http://raceonline2012.org[3]

My comments

Some parts of Britain are now providing disadvantaged people with access to subsidised computer equipment for GBP98 and are providing wireless-broadhand Internet access facilitated by Three Broadband, at GBP9 per month or GBP18 for three months; as part of a 12-month “IT-enablement” trial.

The idea behind this subsidised IT program, which is run by the “Race Online 2012” action group, is to allow access to online skills for study and work. In some cases, the study may be online only such as through distance-learning options like Open University or may require a significant amount of time spent online for the course.

One benefit will be that the program will be working with computer-education facilities around the UK and also provide telephone-based support for the users. This, in my opinion, would also need to respect the needs of people who most likely wouldn’t be computer-literate.

Usually, this class of user will end up with, at best, a “hand-me-down” computer which is very slow at best. They may not get any sort of Internet or may be lucky to get an ADSL broadband service for their Internet connection.

As far as I know, the computers will typically be refurbished units, most likely desktops. But I often wonder what condition they will be refurbished to especially that an ATX-standard “mini-tower” desktop system could be renewed with modest but new hardware at a cost-effective price. The systems will typically come with a flatscreen monitor, keyboard and mouse and come with Linux and other open-source software. The previously-mentioned Internet connection will be provided with a USB-connected wireless-broadhand modem. This solution may cater for the “prepaid-mobile-only” households that wouldn’t be deemed acceptable to run a landline phone service with ADSL Internet due to poor credit standings.

Remploy, who are a supported-workshop program for assisting young people with employment skills and who are behind this program, have a goal to sell 8000 machines in 12 months

Issues that may be raised

Security

It may be so easy to think that Linux may be hard to hack, being a UNIX-derived operating system and not-so-popular, but there would have to be someone like AVG working on a free “household-grade” desktop security package, This is because hackers can turn their attention to any operating system even though it may not be popularly deployed and, as I know in the days when MS-DOS started to become the popular operating environment, other desktop operating environments were still as vulnerable and I always hold that belief.

3G wireless broadband the answer for Internet service?

Some of us may find that the 3G wireless-broadband technology may not be enough for Internet service to this community as the only broadband technology. This is because some neighbourhoods may provide very low or non-existent coverage, especially if the device is a 3G “stick” modem.

There have been other ways of providing cost-effective “always-on” broadband Internet. For example, I reported previously (older article[4], article after SFR takeover[5]) in 2008 on this site about some public-housing developments in Paris, France have been set up with “Triple-Play Social” with 512kbps Internet, regular broadcast TV and inbound telephone use for 1 euro per month courtesy of SFR /Neuf Cegetel. This bandwidth could provide enough bandwidth for most Internet

activities. Some of these activities could be observed especially as there is an increased rollout of next-generation broadband Internet service in most countries.

Links
[1] http://www.bbc.co.uk/news/technology-12205412
[2] tp://www.thinkbroadband.com/news/4539-race-online-2012-to-bring-sub-100-pc-s-to-market.html#utm_source=feed&utm_medium=feed&utm_campaign=feed
[3] http://raceonline2012.org
[4] /2008/12/triple-play-social-in-paris-an-example-for-providing-a-universal-bare-bones-triple-play-service/#utm_source=feed&utm_medium=feed&utm_campaign=feed
[5] /2008/12/triple-play-social-now-in-full-deployment-in-paris/#utm_source=feed&utm_medium=feed&utm_campaign=feed

How to organise your established Facebook Photos in to albums.

20/01/2011 02:37

A lot of us who use Facebook upload pictures to the Photos application for our Facebook Friends (or others) to view. We then end up with larger albums like “Assorted Pictures /Random Pictures” for those pictures that don’t have a common thread like a trip for example. Similarly, when we take pictures using our mobile devices, we end up creating a “Mobile Uploads” album which houses the pictures that came from our mobile devices.

To move a photo in to an album

1. Click on the photo that you want to move. You will see a single-image view of the photo.

2. Click the “Edit this photo” option. You will see a thumbnail of the photo as well as a large field for the caption and a list of any tags that exist.

3. Under the thumbnail of the photo, there is a checkbox to make the image your album cover as well as the “Move to” option.

4. Click the drop-down list at the right of the “Move To” option to choose which album you want to move the picture to. This drop-down list will be populated with the names of the albums that already exist in your Facebook account.

NB: You have to have an album already created in your Facebook Photos account.

5. Click “Save Changes” and the picture will be moved to the album that you want.

My comments about this process.

This process could be improved by allowing you to move the pictures at the thumbnail view and /or allowing you to move a group of multiple pictures at once.

BT rolling out real-standard broadband to Wales and Shropshire communities

17/01/2011 12:54

Articles

BBC News – BT rolls out broadband to two Valleys towns[1]

BBC News – Broadband for two rural market towns[2]

My comments

I have previously covered efforts by companies like Rutland Telecom to have villages and small towns in the UK covered with proper-standard broadband. Examples of this include Rutland Telecom “lighting up” Lyddington[3] in Leicestershire and Hambleton in Rutland[4] as well as Vtesse lighting up Hatt and Higher Pill in Cornwall[5]. Now, British Telecom, the UK equivalent of Telstra, have stepped up to the plate and started rolling out next-generation broadband in to various rural communities in the UK.

Examples of these include Pontcymmer and Baenganw near Bridgend in Wales as well as Oswestry in Shropshire and Stourport in Worcestershire. Infact, they are wanting to “wire up” properly more of the market towns in rural Wales like the whole of Bridgend, Chepstow in Monmouthshire, Hengoed in Caerphilly, Llantrisant and Llantwit Fardre in Rondda Cynon Taf.

One of the aims stated by BT Openreach who manage the infrastructure and provide the service to retail providers was to reduce the numbers of people that left out of the broadband loop when they were talking of the Midlands deployments. Other quotes included the fact that this was not a rural issue but areas of some of the towns wore not receiving Internet service that wasn’t of proper expectations. This was also going to affect the use of broadband Internet service as a business tool.

What I had observed was that even in the tough economic times, broadband Internet service was being pushed to the same level of expectation as mains electricity or a telephone service. This can then allow for ideals like improved business knowledge as well as the ability to provide your goods and services in a competitive manner.

Links
[1] http://www.bbc.co.uk/news/uk-wales-south-east-wales-12171896
[2] http://www.bbc.co.uk/news/uk-england-12184503
[3] /2010/04/more-rural-broadband-activity-in-the-uk-lyddington-leicestershire/#utm_source=feed&utm_medium=feed&utm_campaign=feed
[4] /2010/12/another-uk-village-to-have-fibre-to-the-premises-broadband/#utm_source=feed&utm_medium=feed&utm_campaign=feed
[5] /2010/08/next-generation-broadband-hits-the-country-in-the-uk-again-this-time-in-cornwall/#utm_source=feed&utm_medium=fee

d&utm_campaign=feed

Happy 10th Birthday, Wikipedia

15/01/2011 12:22

Articles

At 10, highlighting Wikipedia's past and future | CNET News[1]

Web site

http://en.wikipedia.org[2]

My comments

Previously, an encyclopaedia was simply a multi-volume set of books which consolidated information on many different topics. The typical examples were the common 50-volume Encyclopaedia Britannica or even the more common twenty-volume sets like World Book Encyclopaedia that exist on many bookshelves. One main disadvantage with these sets was that they dated the moment they were printed and some of the publishes tried to get around this by publishing "yearbooks" which hand newer information in them every year.

In the 90s when "multimedia computing" started to take off, there were some so-called "multimedia encyclopaedias" like Microsoft Encarta. These were an electronic encyclopaedia which were issued on a CD-ROM and had various forms of rich media like animations, sound or video. Examples of this included various "how-it-works" animations; sounds of various animals; audio recordings of classic speeches or even news footage of historic events.

Now the Internet has enabled the existence of "Wikipedia" which is a free open-source user-revised encyclopaedia that is presented using a "wiki" content management system. This has allowed for always up-to-date content that can even stay fresh no matter what happens.

The user-revised model has advantages with extra facts being added or facts being revised as required. But it had its fair share of problems with poor-quality trivial matter, defaced articles and editing that was driven by personal, commercial or political agenda. This reduced the quality and veracity of Wikipedia's content and had people place doubts on it as a valid information resource.

There have been recent steps to improve the quality and veracity of content. These steps have been augmented by editors who have "teeth" and are ready to identify the content that goes against the standards. A common example of these steps included the requirement for facts to be cited to a real source.

Now there are smartphone apps and plug-in modules for browsers and other programs that integrate searching the whole of Wikipedia These have become a way to take Wikipedia further as one of the main core electronic encyclopaedias.

But now Wikipedia has become a valuable resource for most people, whether for study or even the pub trivia nights. As well, this site is one of the top few Websites to be accessed from most home and small business networks when one is stuck for an answer to a question.

So here it is from HomeNetworking01.info —

> **Happy 10th Birthday Wikipedia!**

Links
[1] http://news.cnet.com/8301-13772_3-20028451–52.html?tag=nl.e404
[2] http://en.wikipedia.org

Consumer Electronics Show 2011–Part 3

12/01/2011 06:01

Now we come to the issue of network-infrastructure equipment that will need to support the increasing demands placed on the home network by the previously-mentioned smartphones, tablet computers and Internet-enabled TVs.

Network Infrastructure

Network Connectivity

Some newer chipsets have appeared which will increase network bandwidth for the 802.11n Wi-Fi segment and the HomePlug AV segment. The current implementations may use manufacturer-specific implementations which won't bode well with the standards.

The first new "call" is the 450Mbps 802.11n WPA2 WPS Wi-Fi segment which is being provided by most network makes for their midrange routers and access points. Access points and routers that work with this specification use three 802.11n radio streams to maintain the high throughput. The full bandwidth may be achieved if the client device is equipped with an 802.11n wireless network adaptor that supports the three streams but your existing devices may benefit due to reduced contention for the wireless bandwidth due to the access point /router offering three streams.

Most of the routers shown at the Consumer Electronics Show this year that support the 3-stream 450Mbps level for the 802.11n wireless network functionality also offered dual-band dual-radio operation to the same specification. Here, these devices could work on both the 2.4GHz band and the 5GHz band at this level of performance.

Some manufacturers were trying out the idea of a 60GHz high-bandwidth media network which may be based on a Wi-Fi (802.11 technology) or other proprietary scheme. This could lead to three-band multimedia routers and access points that use 2.4GHz and 5GHz for regular whole-home wireless networking and 60GHz for same-room wireless networking.

The second new "call" is the 500Mbps throughput being made available on high-end HomePlug AV devices. These powerline network devices may only achieve the high bandwidth on a segment consisting of the high-bandwidth devices that are based on the same chipset. Here, I would wait for the HomePlug AV2 standard to be fully ratified before you chase the 500Mbps

bandwidth on your HomePlug segment. Of course, these devices can work with HomePlug AV segments.

The third new call is for midrange high-throughput routers to have Gigabit on the WAN (Internet) port as well as the LAN ports. This is more relevant nowadays as fibre-based next-generation broadband services are rolled out in most countries.

Everyone who exhibited network-infrastructure equipment offered at least one 450Mbps dual-band dual-radio router with Gigabit Ethernet on the WAN (Internet) connection as well as the wired-LAN connection. As well, most of these routers are equipped with circuitry that supports QoS when streaming media and some of them have a USB file-server function which can also provide media files to the DLNA Home Media Network.

Trendnet also offered an access point and a wireless client bridge that worked to this new level of 802.11n performance. They also demonstrated power-saving circuitry for Wi-Fi client devices which throttles back transmission power if the device is in the presence of a strong access point signal for their network. This was ostensibly to be "green" when it comes to AC-powered devices but would yield more real benefit for devices that have to run on battery power.

They also ran with the TPL-410AP which is a HomePlug AV Wireless-N multi-function access point. Another of those HomePlug access points that can "fill in the gap" on a wireless network or extend the Wi-Fi network out to the garage, barn or old caravan.

They also issued the TEW-656BRG 3G Mobile Wireless N Router, which is an 802.11n "MiFi router" that is powered by USB and works with most 3G /4G modem sticks available in the USA. It is of a small design that allows it to be clipped on to a laptop's lid or a small LCD monitor.

TP-Link had their 450Mbps three-stream dual-band dual-radio router with Gigabit on bot WAN and LAN Ethernet connections. As well they fielded a single-stream 150Mbps USB stick as the TL-WNT23N.

They also tried their hand with IP surveillance with the TL-SC4171G camera . This camera can do remote pan-tilt, and 10x digital zoom. It connects to the network via Ethernet or 802.11g Wi-Fi (not that much chop nowadays) and is equipped with an IR ring for night capture, as well as a microphone and speaker.

Netgear were more active with the 450Mbps three-stream routers with Gigabit LAN. Two of the models are broadband routers with Gigabit WAN, while one is an ADSL2 modem router which I think would serve the European and Australian markets more easily. The top-end model of the series has a USB file server function which works with the DLNA Home Media Network and also with Tivo "personal-TV devices".

They also released the XAV5004 HomePlug AV switch which is the 500Mbps version of the their earlier "home-theatre" four-port HomePlug switch. Of course, they released the XAV2001 which is a compact "homeplug" adaptor which connects to the regular standards-based HomePlug AV segment.

They also have released the MBR1000 Mobile Broadband Router which works with 3G/4G wireless broadband or Ethernet broadband. This unit is being provided "tuNrnkey" for Verizon's new 4G LTE service.

Netgear have also fielded the VEVG3700 VDSL2/Gigabit Ethernet dual-WAN router with Gigabit Ethernet LAN, Cat-IQ DECT VoIP phone base station. This device, which is pitched at triple-play service providers also supports DLNA server functionality. As well, they also had a DECT VoIP kit available for these providers

As well, Netgear have tried their footsteps in to IP-surveillance for home and small business with a camera and an Android-driven screen for this purpose.

D-Link's network hardware range include the three-stream 450Mbps routers with Gigabit WAN/LAN, a multifunction access point /repeater for the 802.11n network as well as a new DLNA-enabled network-attached storage range

As far as the MoCA TV-coaxial-cable network is concerned, Channel Master is the only company to release any network hardware for this "no-new-wires" network. It is in the form of a MoCA-Ethernet 4-port switch for the home theatre.

"Mi-Fi" wireless-broadband routers

Every one of the US cellular-telecommunications carriers are catching on to the 4G bandwagon not just with the smartphones and tablets but with the wireless-broadband routers.

Sprint have a unit for their WiMAX service while Verizon are fielding a Samsung LTE "Mi-Fi" as well as the aforementioned Netgear MBR1000 router.

Computer hardware and software

Monitors

Some of the companies who manufacture monitors are looking at the idea of "Internet-connected" monitors which have a basic Web browser in them so you don't have to fire up a computer to view the Web.

CPU/GPU combo chips

These new processor chips combine a CPU which is a computer's "brain" as well as the graphics processor which "draws" the user interface on to the screen. AMD and Intel were premiering the "Accelerated Processor Units" and the Core "Sandy Bridge" prcessors respectively at the CES this year.

Intel were trumpeting the fact that this technology could make it harder to pirate movie content but this is more about mainstream computing and small-form-factor hardware being behind this space and power saving processor hardware.

Sony had lodged a commitment to AMD to use the Zacate "Accelerated Processor Unit" in some of their VAIO laptops.

Other hardware

AMD haven't forgotten the "performance computing" segment when it comes to processor chips and released the quad-core and 6-core "Phenom" desktop and gaming-rig CPUs.

Seagate have also made the "GoFlex" removable /dockable hard disks a standard by building alliances with third-parties to make

hardware that works to this standard. Could this be another "VHS-style" alliance for dockable hard disks?

Microsoft also used this show to première their Touch Mouse which uses that same touch operation method as Apple's Magic Mouse. Do I see an attempt for them to "snap at" Apple when it comes to "cool hardware" as well as software?

The Microsoft Platform

There has been some activity with the Microsoft Windows platforms now that set-top boxes and tablet computers are becoming the "order of the day"

One direction Microsoft is taking is to port the Windows Platform, which was primarily written for Intel-Architecture processors, to the Acorn ARM-architecture processors. The reason that this port is taking place is due to these energy-efficient RISC processors being commonly used in battery-driven applications like tablet computers. They are also popular with other dedicated multimedia devices like set-top boxes and TV applications.

As well, Microsoft will be working on a lightweight Windows build for TV applications like set-top boxes. This is although they have previously written Windows-CE builds for this class of device.

Microsoft also want to make a variant of the Windows Phone 7 for tablet computers and are starting work on the Windows 8 project.

Similarly, Somsung has demonstrated the second incarnation of the Microsoft Surface platform This one comes in a slimmer table-based form rather than a unit that is as thick as the 1980s-style "cocktail-table" arcade game machine.

Conclusion

The Consumer Electronics Show 2011 has certainly put the connected home on the map. This is due to affordable smartphones and tablet computers becoming more ubiquitous and Internet-provided video services becoming an increasing part of American home life.

It will be interesting to see what will happen for the other "pillar" of the consumer-electronics trade fair cycle – the Internationaler Funkaustellung; and how more prevalent the Internet TV, smartphone and tablet computer lifestyle will be in Europe and Asia.

A fully-fledged Skype client for the iOS at last

10/01/2011 07:00

Articles

Skype adds video calls to iPhone app | The Register (UK)[1]

Skype offers iPhone video calls over 3G | The Register (UK)[2]

Skype: Update bietet Videotelefonie via iPhone und iPod touch | Computer Bild[3] (Germany – German language)

My comments

There have been previous versions of Skype released for the iPhone but these have been limited in functionality compared to the desktop Skype clients. In some situations, you couldn't use Skype with the 3G wireless-broadband connection and you didn't have video calling.

Now Skype have delivered Skype 3.0 for Apple iOS which yields a client that does what is expected of the service. Unlike Apple's FaceTime videophone client which only works with Apple's platforms, this client can communicate with an established universe of Skype desktop, mobile and dedicated communications clients as well as make and take calls to and from regular telephone services using the paid SkypeOut and SkypeIn services. The software also allows the iOS user to join in or create a video-conference between multiple participants.

You can use this client in a Wi-Fi network or with 3G but you will need either an "all-you-can-eat" data plan or a data plan with a generous data allowance to gain best value when using 3G.

There are some other caveats that can affect user experience. If you run this program on an iPad or older iPod Touch devices, you will be able to see your correspondent's video but they won't be able to see you. This is because these devices don't have an integrated camera. As well, if you use the ubiquitous iPhone 3GS, the experience won't be as good because of its slow processor and the absence of a front-facing camera.

As well, I would recommend using the phone on "speaker phone" or using a wired or Bluetooth headset when engaging in a videocall so you can see the other party on the display.

Links
[1] http://www.theregister.co.uk/2010/12/30/skype_video_calls_in_iphone_app/
[2] http://www.theregister.co.uk/2010/12/30/skype_iphone_3g/
[3] http://www.computerbild.de/artikel/cb-News-Handy-Skype-Update-bietet-Videotelefonie-via-iPhone-und-iPod-touch-5875068.html

Consumer Electronics Show 2011–Part 2

10/01/2011 05:45

The Android technology doesn't stop at handsets or tablets anymore at this year's CES.

In the car

Parrot are premiering the "Asteroid" which is an Android-powered car radio /multimedia player. It has USB for connectivity to iOS devices, USB flash memory, wireless-broadband modems and GPS pucks at the moment as well as line input for regular audio devices. I am not sure what Bluetooth or hands-free calling abilities it has at the moment but this could change by the time it is released. Of course it has FM radio and, through the 3G connectivity and an Android app, could support Internet radio in the car[1] as well as being a media player and GPS navigation device. It has a power output of 55W

x 4 but also has three preamplifier outputs (front, rear, subwoofer) so it can be the head unit for the most tricked-out sound system on the street. Oh yeah, boys!

Similarly, Fujitsu Ten are previewing an satellite-navigation unit which is powered by the Android operating system. The main issue with these Android systems at the moment is that the Google "Android Marketplace" doesn't support them because they use an interface that is dissimilar to the handset or tablet devices. Here, Parrot or Fujitsu Ten will either have to contract with an Android app store to supply applications to these devices and this app store would have to support the user interfaces provided by automotive Android devices.

In other car-tech news, Ford have developed an AppLink system so that specific iOS apps can be operated from the car's dashboard. As well, General Motors have developed an IOS link to their OnStar vehicle telematics system but the main problem with these systems is that they necessitate an extra app on the smartphone for each marque. This is compared to Terminal Mode which the European vehicle builders are implementing, which allows one piece of software on the smartphone for many different vehicles and suits the reality that most of us will drive different vehicle marques through our driving life and even have regular access to two or more different vehicles.

As well, GM are intending to implement the PowerMat wireless-charging system in the American-market vehicles from model-year 2011 onwards. This allows devices with Powermat charging circuitry, whether integrated or as an add-on module to be charged or powered on a special mat wirelessly. I have wondered whether this announcement will then apply to GM nameplates other than Buick, Cadillac, Chevrolet or GMC or other markets.

Networked Home Entertainment

Video Entertainment and the Home Theatre

As far as video-based home entertainment goes, 3D video still rules the roost with every one of the major camera names from Japan with a 3D camera or camcorder in their model lineup. As well, every major TV brand that serves the US market is selling a 3D flatscreen TV in their model lineup. Most of the manufacturers are working on 3D viewing technologies that either don't need glasses or can work with lightweight glasses. This also includes some manufacturers establishing design partnerships with glasses-frame designers to make attractive 3D-viewing glasses.

But there is a lot more action when it comes to network-enabled TVs and video peripherals This is again driven by the supply of "over-the-top" Internet video services like Netflix and Hulu Plus. It is also being helped along by manufacturers building up "app platforms" which allow the user to download apps to the TV as if it was like one of the smartphones. It can capture the reality of interactive TV as well as use of common Internet services like Twitter, YouTube and Facebook from the comfort of your couch. As well, programs like Skype are being implemented on these TVs in order to make them become large-screen video-conferencing units for the home or small business.

LG have supplied the ST600 Smart TV kit, which is an add-on kit for selected (or all?) LG TVs to link them to the Internet and the DLNA Home Media Network. As well, one of their pico-projectors that they had on show is equipped with an digital-TV tuner and can stream content from a DLNA Media Server.

Sony now has it that all of their new Blu-Ray players are all DLNA and Gracenote enabled/They all can quickly start a Blu-Ray movie and have support for the "Media Remote" RF link with Wi-Fi-enabled iOS or Android device running a specific app. These same features are also available to their Blu-Ray home theatre systems.

As well, most of the Sony BRAVIA TV range released this year will be network-enabled with DLNA, Internet TV, Skype large-screen videophone and similar functionality. Some models will have integral 802.11n Wi-Fi functionality while the lower-cost models will require a dongle to connect to the Wi-Fi network. This really shouldn't worry most users because they could use direct Ethernet or HomePlug AV links to connect the TV to the home network.

The Skype videophone function will work with an optional USB webcam /microphone kit that will be available from Sony.

As well, most of the TVs and home-theatre systems honour the full HDMI 1.4 expectation with Audio Return Channel. This means that the sound from the TV's integrated sources like the digital TV tuner travel back to the home theatre amplifier using the same HDMI cable used to connect the TV to that amplifier. There is no need to use extra digital cable runs to have properly-decoded surround sound from TV broadcasts received via the TV's tuner.

As well, Sony has released a network-audio product that makes Apple squirm when it comes to their Airport Express and AirPlay subsystem. This product which comes in the form of the HomeShare speakers connects to a Wi-Fi home network and can play out audio content under the control of a UPnP AV (DLNA) Control Point like Windows 7 or TwonkyMedia Manager. This same control functionality is also available in Sony's latest Blu-Ray Players as well as the NAS-SV20 and NAS-SV10i iPhone docks.

Samsung have come around with a Blu-Ray player that is the thinnest such player ever. This Wi-Fi-enabled player can be wall-mounted and, in my honest opinion, is cutting in on Bang & Olufsen's "design AV" territory.

They also are releasing the D6000 TVs which work with RVU compliant pay-TV gateways. This standard, which is a superset of DLNA for pay TV applications). enables access to the full pay-TV feature suite like pay-per-view or video-on-demand without the TV being connected to the pay-TV operator's set-top box/This concept has been proven to works with an RVU server box that links to DirecTV's satellite pay-TV service.

Iomega have also released a Boxee TV set-top box which is similar to D-Link's unit. But the similarity stops here because it has integrated NAS functionality with DLNA Media Server. It is capable of working with Ethernet wired or 802.11n Wi-Fi networks and uses a double-side remote with QWERTY keyboard. It is available as an enclosue or with a 1Tb or 2Tb hard disk.

Vizio, a low-cost TV brand in the US similar to Kogan, is to implement Via Plus (Google TV) in their Internet-enabled TVs. They will be providing apps that link to Hulu Plus, Blockbuster

On Demand, and other popular “over-the-top” TV services. These sets will also have Skype functionality when used with a USB webcam. Vizio will also be implementing glasses-free 3DTV and are dabbling in 21:9 ultra-widescreen TV

Cisco have been focusing on the interactive TV front but in a different way. They sell the Scientific Atlanta set-top boxes on contract to cable and satellite providers and are implementing an app platform on their newer boxes. This also means that they are providing a “VideoScape” content-selection experience so that users can find the content they are after or look for related content easily.

JVC have released the first “soundbar” speaker system which implements the HDMI 1.4 Audio Return Channel. Here, this technology comes in to its own with these speakers because the sound from the TV emerges through the easy-to-set-up soundbar unit.

Internet radios

Grace Digital have released three Internet radios that have a similar user interface to the Grundig TrioTouch stereo Internet radio or the Revo IKON stereo Internet radio[2]. Here, these sets use as their primary user interface a colour LCD display with icons laid out in a grid not dissimilar to a smartphone or tablet. The Mondo is designed to be a full-on clock radio for the bedside and has a 3.5” display, Ethernet and line-out connectivity and a remote. The Solo Touch is a tuner that connects to one’s favourite music system and has a large 4÷3” touchscreen. It connects to the home network via Ethernet. The Bravado X is a stereo table radio with line in /out and has a 2.7” display. These units can also be controllable via a smartphone app which is available for the iOS only at the moment.

As well, Vizio have jumped on the Android bandwagon by providing a stereo table radio which operates on the Android platform. This one is controlled by a colour LCD touchscreen like the typical smartphone. It would most likely would have an Internet-radio app and also pull in music from a DLNA Media Server device.

The next article in the series will focus on network-infrastructure technologies for the small network and what is being offered here.

Links
[1] /2010/02/internet-radio-in-the-car-why-not-2/#utm_source=feed&utm_medium=feed&utm_campaign=feed
[2] /2010/03/product-review-revo-ikon-stereo-table-internet-radio-frontier-internet-radio-platform/#utm_source=feed&utm_medium=feed&utm_campaign=feed

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Consumer Electronics Show 2011–Part 1

09/01/2011 13:41

I am reporting on the Consumer Electronics Show 2011 which is currently running in Las Vegas. This year, the show is focused around the connected home and lifestyle and I am intending to run the report as a series due to the many trends occurring at this show.

Mobile Handsets and tablets

Most of the activity this year is centred around the smartphone and the tablet-based multifunction internet device (a.k.a. a tablet computer or “fondle-pad”). Here, the main operating system of choice is Google Android. There are two major versions being promoted at this show – Version 2.3 for the smartphones (and other devices) and Version 3.0 for the tablet devices.

This is also augmented by the fact that the US mobile-phone carriers are rolling out 4G wireless-broadband networks. These are either based on LTE technology or WiMAX technology and offer greater bandwidth than the current 3G technology used to serve the typical smartphone user with Facebook data. This leads to quicker content loading for the phone and access to IP-based multimedia.

Infact the “big call” that is being run by these carriers when promoting their devices is the “**4G Android smartphone”** as being the preferred device to start a mobile service contract on. This is more noticeable with Sprint who are using the “4G Android Smartphone” in their graphics for their online ads.

The Android handsets are coming thick and fast, especially from Samsung, HTC (Evo Shift 4G /Thunderbolt 4G) and Motorola (Cliq 2). The Motorola is also intended to support “call-via-WiFi” so as to offload call traffic via Wi-Fi networks including T-Mobile’s hotspots. This is achieved through the use of the “Kineto” app.

The HTC Evo Shift and Thunderbolt phones are also known to implement a slider design similar to some Nokia phones and use this design to expose a hard keyboard for text entry.

Samsung are going “tit for tat” with Apple by issuing an Android smartphone, MID or tablet device in response to Apple releasing an iOS device. Their answer to the iPod Touch was a Galaxy Player which is Android powered and uses a Super Clear LCD for its display.

Sony have also come up with the Sony Ericsson Xperia Arc mobile phone which has a display and experience as good is the iPhone 4 – the phone to be “seen” with.

As far as phones go, there hasn’t been any Windows Phone 7 action through this CES, but there have been some general innovations happening. One is to design a multi-core processor for handsets, tablets and similar devices. This design would have to be focused around power conservation in order to gain longer battery runtime for these devices. This has manifested in three “dual-core” smartphones being released by Motorola.

Similarly, there have been 40–80 of the tablet computer models

being launched. This number may not account for different memory sizes for particular models or whether some models will come with wireless broadband or not. This is also the time that Google are putting the “Honeycomb” version of the Android operating system on the map. This version, Android 3.0, is optimised for the tablet user interface and uses more impressive user interfaces than what was used for Android 2.x in the tablet context. It therefore now sets the cat amongst the pigeons when it comes to a showdown concerning the iPad versus the Android 3.0 tablets.

Stay tuned to HomeNetworking01.info for more posts about the Consumer Electronics Show in Las Vegas.

A digital camera that can be controlled by a smartphone

07/01/2011 05:21

Article

CES: Samsung SH100 camera wants to be BFF with your smartphone – CES 2011 CNET Blogs[1]

My Comments

At this year’s Consumer Electronics Show, Samsung had demonstrated a compact digital camera which has integrated 802.11n Wi-Fi functionality. It would have the usual benefits like uploading pictures to a computer or cloud-based storage service; and exhibiting pictures on a DLNA-compliant video-display device.

But this camera has a feature that has impressed me very much. It is to use the Samsung Galaxy S smartphone as an external viewfinder and control surface. This has been a function that I have been wishing for with digital photography and cinematography.

Here, this would work well with a photography situation that most of us encounter. When we are at a party or nightclub, we may want to take a picture of everyone on that dance floor dancing to that dance hit thumping through the speakers. Similarly, we may want to get a picture of the live band playing at that pub gig which is packed out. When we are outdoors, we may want to grab a picture of the floats that are part of the parade for example.

In these situations, you may need to lift the camera over your head but you won’t get a fair idea of what you are to photograph due to a small screen size or viewing the screen at an “off angle”. Here, you just end up taking a large number of “rough shots” that you will end up editing out for example.

Similarly, if you use your camera for wildlife photography for example, you will find it hard to take the right shot because the moment you get near the camera, you spoil the shot.

Here, Samsung has established a wireless link which uses the phone’s screen as a viewfinder and control surface for the camera. The user would have to download an app to the phone in order to achieve the functionality. This link is also set up so that pictures can be sent to the phone for sharing via the phone using MMS, email or Web-based services.

There have been further questions about other smartphones, whether based on Android, iOS or other platforms being able to have this functionality. What actually needs to happen is for device classes to be defined or existing device classes reused and amended for photographic /cinematographic applications. This is to provide remote viewfinder and status display as well as remote control of the shutter /recording start-stop and other aspects of the exposure. Similarly, the device classes also have to provide control of flashguns and other lighting in order to synchronise them with the exposure.

Here, the device classes should work with USB wired connections as well as wireless Bluetooth or Wi-Fi connections.

Similarly, cameras could implement USB “On-The-Go”, Bluetooth “Object Push Profile” or similar technologies to allow a user to upload a picture to the phone. As well, the phone could provide dynamic scale-down of high-resolution images when sending pictures by MMS or email. This would avoid me having to take pictures with the phone rather than my digital camera if I intend to use the picture for a picture message for example and I can still use the good-quality imaging attributes of the camera to yield a good quality photo.

At least Samsung has taken a step in the right direction by enabling a digital camera to work with a smartphone for improved photography.

Links
[1]
http://ces.cnet.com/8301-32254_1-20027142–283.html?tag=mncol;txt

FCC to set the first yardstick for Net Neutrality

04/01/2011 03:09

News articles

HP Blogs – FCC does define rules on net neutrality – The HP Blog Hub[1]

FCC Approves First Net Neutrality Rules | Datamation[2]

From the horse’s mouth

FCC Website[3]

Report and Order concerning Net Neutrality (PDF)[4] – FCC

Press Release (PDF)[5] – FCC

My comments

Through this action. the FCC have become the first national-government telecommunications department in a major English-speaking country to use their executive power to “set in stone” a minimum standard for “Net Neutrality”.

Basically, their standard requires wireline services (cable Internet, ADSL, optical-fibre) to pass all lawful Internet content and allow users to connect non-harmful devices to their Internet

services. This would therefor prohibit limiting of access to “over-the-top” Internet video, VoIP and similar services. Similarly it requires wireless services (3G, WiMAX, etc) not to blocking sites that compete with their business offerings like VoIP services.

There is still a problem with the wireless services in that they could block access to competing app stores on platforms that permit such stores, set up “walled gardens” when it comes to mobile content or provide “preferential tariffs” for particular services. This can be of concern to those of us who, for example, use client-side applications and commonly-known URLs to gain access to the Social Web rather than the carrier’s preferred “entry point” bookmarks or URLs. Similarly, the carrier could gouge people who go to favourite media Websites rather than the ones that the carrier has a partnership with. This last point may be of concern when mass-media outlets and wireless-broadband carriers see the “mobile screen” as another point of influence over the populace and establish partnerships or mergers based on this premise.

Net Neutrality will also have to be considered an important issue as part of defining the basic Internet service standard for the country so that service providers or gavernments can’t provide it just to people who purchase upper-tier service for example.

A good issue would be for other national-government or trading-bloc communications authorities to tune this definition further so that if there is the goal of Net Neutrality, it becomes harder to avoid the standard.

Links
[1] http://h30507.www3.hp.com/t5/The-Next-Big-Thing/FCC-does-define-rules-on-net-neutrality/ba-p/86225
[2] http://itmanagement.earthweb.com/features/article.php/3918076/FCC-Approves-First-Net-Neutrality-Rules.htm
[3] www.fcc.gov#utm_source=feed&utm_medium=feed&utm_campaign=feed
[4] http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db1223/FCC-10-201A1.pdf
[5] http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db1221/DOC-303745A1.pdf

A DLNA-driven electronic-picture-frame and NAS system concept – what could it offer

02/01/2011 14:28

The current situation with electronic picture frames (digital picture frames)

I have been to a friend’s home and had seen an electronic picture frame that they received for a previous Christmas sitting on their sideboard, turned off and hidden behind other framed pictures on that same sideboard. This picture frame has some old pictures that the close friend doesn’t really want and their granddaughter has to come up from the country with a memory key full of images in order to update the picture frame’s collection. Similarly, I have noticed that our household and another household are becoming the two households that are involved with updating an electronic picture frame belonging to a close friend.

This usually sees most households in situations where managing the typical sub-$100 electronic picture frame becoming very tenuous and ends up being a serious task if one has to update many of these frames that are spread across the households that make up an extended family. This situation would typically be in response to a family event like a wedding, the arrival of a new baby or a family reunion.

If the event happens overseas, the family members will need to email the pictures or send them using Flickr, Facebook or similar online services to nominated family members in other countries. Then it’s the job of these family members to push the pictures to optical disks, SD cards or USB memory keys for uploading to relatives’ picture frames.

There are some online picture frames on the market but these are tied to particular services which may require the user to take out a subscription. Similarly, some of the frames also require the user to run special manufacturer-supplied software to deliver pictures over the network to the frame. As well, a lot of Wi-Fi-enabled picture frames on the market are not DLNA-compliant thus wouldn’t work with most network-attached storage devices or storage-enabled routers on the market.

Infact one close friend of mine who had taken me shopping for my birthday present had noticed me looking at network-attached storage devices and looking carefully for the UPnP and DLNA logos on the NAS device’s box before I offered it as a possible idea for a group gift. I had later explained that this kind of functionality was to be a step in the right direction to an easily-manageable digital-image-storage system once connected to DLNA-compliant Wi-Fi picture frames.

How could the DLNA-based system be built

The components

The digital picture frames

There would be one or more DLNA-capable electronic picture frames or similar devices connecting to the home network by 802.11n Wi-Fi, HomePlug AV or other similar means. These devices would be DMR devices which permit other devices on the network like network-enabled remote controls to determine what is shown on the devices.

The media server

A DLNA-enabled network-attached-storage which works with a unique POP3/IMAP email inbox or established cloud-driven image-delivery service can work as the picture storage centre. Pictures can be uploaded locally via a USB port or SD card slot("quick drop"), via the network using CIFS or NFS (common network file-handling protocols) or the unit can allow FTP/HTTP "block upload" for remote uploading or simply allow the user to email photos to it.

Other devices such as another of the picture frames or the network's Internet-gateway device could work as an alternative primary or secondary media server. This may be achieved through the devices using flash-memory technology or a small hard disk; and may be applicable for receiving emailed images or images from online services. They could even work with a NAS by "offloading" images to that device when new images come in.

Metadata

The server device would make use of established metadata tag families like what is used with Windows Live Photo Gallery and iPhoto for indexing the collection and allowing various search and browse options. It is alongside use of file-system and date/time hierarchies that would be typically used by these devices. These include keyword-browsing with support for user-created "keyword trees" as well as multidimensional searching. The DLNA server software should support the newer person-tagging and place-tagging functionality that newer image-management software offers as well.

[1]

Do we tag a picture of the Sydney Harbour Bridge as simply "Sydney" or as "Sydney Harbour Bridge", even as a sub-tag of Sydney?

An issue that may be of concern with place-tagging is how one tags places in a town. One may tag "general" or "landmark" pictures with the name of the town or establish a hierarchy based on the town's name and a tag list for the landmarks. They may not use this tagging system when it comes to pictures of particular locations that they have visited like homes, offices or similar places.

Another metadata form that could be supported for people who make the time to work with metadata is the creation of horizontal or vertical "pan lines" in a picture. These lines would determine how a picture frame pans across a picture that is too wide or tall for it and can avoid us seeing the bodies of the subjects that are in a group photo for example. These "pan lines" can also have "home points" in the picture to allow for the photographer to have control over default static presentation on horizontal or vertical displays.

Control

The picture frames or the controller need to be able to select multiple UPnP collections and show the pictures in these collections in a sequential or random manner. It can also include whether to play the videos with sound or not at certain times of the day in order to avoid the sound track being of nuisance value.

Advanced playback control options

Frame groups

One or more of the picture frames which have controller capability or a separate controller device /application the ability to "push" pictures from one collection or set of collections to one group of frames such as frames installed in the lounge room. This function would require that random pictures from the collection or set of collections are shown on each frame in the same group.

A frame could be a member of many groups rather than just one group. An example of this could be frames that are placed on the mantlepiece being their own group but being part of a super-group encompassing all of the frames that are in the lounge room for example.

Event-driven playback

The controller could support timed playback so that particular collections of images and content are shown to particular frames or frame groups at certain times or in response to certain events. An example of this could be to exhibit Christmas family pictures from Advent through to Epiphany; or show pictures of a city that you intend to travel to for two weeks before the journey. Another example would be to immediately show newly-arrived pictures on certain frames as soon as they come in or be "slaved" to an intruder-alarm /access-control system that is configured for individual household members and show favourite pictures to particular household members when they come in.

Picture Sources

Most pictures will be imported from digital cameras via one or more networked computers. Here, the pictures may be edited and tagged with appropriate metadata, then they will be synchronised to the network-attached storage drives for availability across the network.

Images delivered by email

A key question that will be raised is which device checks for new pictures that have come in by email? Is it the network-attached-storage unit, the Internet-gateway-device (broadband router) at the "edge" of the network or one of the electronic picture frames?

- If the network-attached-storage checks for the pictures, it will have to check a known email address then copy pictures to a particular directory. This may be easier for a multi-frame system because it is a device that is suited to being kept available all the time.
- If the Internet-gateway-device is to do the job, it will have to check the email address and store incoming pictures to a particular directory on integrated or attached mass-storage like an SDXC card, solid-state drive or hard disk. Then it will upload the pictures to the network-attached-storage at regular intervals. As well, it will also be required to be a DLNA server in order to share this directory with the picture frames so the newest photos of the new grandchild are highly available.. This may be OK if the only device you want to keep available when you are out is the Internet-gateway-device. It may also be OK if the intention is to make the Internet-gateway-device become a central storage server for the photos, which is something that may be desired of by manufacturers who want to provide a "one-device-does-all" solution for the network-Internet "edge".
- The electronic picture frame solution will be similar to the Internet-gateway-device solution but this will again require a third device to be highly available to share or upload the pictures. This device may be able to display the pictures as soon as they arrive then upload them on a regular basis. It will also be required to have a large-capacity rewriteable mass-storage system like an SDXC card on board.

Device manufacturers and Internet providers may prefer that their device is the one that collects emailed pictures and this could lead to some confusion when you add a device to this ecosystem.

When picture arrives by email, the router, picture frame or network-attached-storage device would copy the pictures to a "new pictures" directory. This directory would be distinctly selectable on UPnP AV clients and contain these new pictures. Pictures older than a user-determined time would be pushed in to the main photo collection so they can be available for viewing. As well, users can move the pictures to the main collection and add appropriate metadata to the pictures using a regular computer connected to the network.

Integration with online services

A lot of us do work with online photo albums, whether as dedicated sites like Flickr, Photobucket or Picasa Web Albums; or as part of a social-network setup like Facebook. There will then be the desire from both the service providers and their users to integrate the photo collections with the DLNA Home Media Network.

The device that works as the "hub" may have to regularly visit these sites and cache the pictures from the albums to the local mass-storage in order to provide constant availability of these pictures. One issue with this is whether to allow the device to cache every album that its associated account has access to or allow the user to nominate albums or "peers" (friends, Pages, etc) for caching. This is important with users who have a large number of "peers" that they subscribe to from these services.

As well, there would be the issue of establishing a UPnP Content Directory tree which works in this order: Service (Facebook, Flickr, etc) – Account (own account, each "peer" account (Facebook Friend, Page, Picasa Friend, etc)) – Album /Photostream (including images in account's "root" album).

Support for and integration with premium content

An option that is being encouraged with some networked picture frames is the delivery of commercial content such as clip-art /stock-photo images, news-photo images (useful if you are associated with a news article) and comic strips /cartoons. Similarly there could be such content as "information screens" (news, weather, etc) being delivered to these frames.

Here, it may be worth considering where this kind of premium content should be held and how new providers are added. This could be driven by an "app" model where customers can add content sources in a similar manner to what is being done with the iOS and Android platforms.

Conclusion

Once these ideas are looked at and the concept of DLNA-driven digital picture frame management is achieved, this could increase the utility of the digital picture frame and other image-display devices as a way of showing the increasingly-large library of digital images.

Links
[1] http://homenetworking01.info/wp-content/uploads/2011/01/2010–10-25–007.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed