

# HOMENETWORKING01.INFO

17/01/2012 |

---

## Consumer Electronics Show 2012-Part 3

13/01/2012 03:54

### Network Technology

There are a few major trends that I have noticed for the home and small-business network at this year's Consumer Electronics Show. But the big names like D-Link and NETGEAR had chosen to run private showings of their products in the many hotels around Las Vegas rather than use the Convention Center.

### Wireless networking

The 802.11ac Gigabit wireless network standard has been ratified and a lot of the manufacturers are showing prototype chipsets and endpoint devices for networks based on this standard. TRENDNet had shown a router and a client bridge as a proof of concept for a wireless link on this standard and D-Link had registered interest in developing their 802.11ac implementation.

On the other hand, Belkin, D-Link and Engenius ran with premium "N900" routers as their top-shelf models. These are simultaneous dual-band routers that run three data streams on each of the two Wi-Fi bands with a total theoretical throughput of 450Mbps per band.

As well, TRENDNet had tried their effort at another of those "universal Wi-Fi range extenders" which is a device class that could cause some mistakes.

### Coaxial and Powerline Networking

MoCA have brought their TV coaxial-cable network specification up to 2.0 which allowed for a headline speed of 400Mbps with Broadcom showing a system-on-chip that works with this standard. They were pitching it at the set-top-box market, especially for multi-room cable-TV deployments.

On the other hand, HomePlug PowerLine Alliance have made the HomePlug AV2 specification official. This standard, which is interoperable with HomePlug AV powerline network segments can support MIMO /repeater operation for a robust powerline segment as well as allowing for a Gigabit physical-layer bandwidth for this segment. The former MIMO advantage makes it that each HomePlug AV2 node acts as a repeater and can take data from two or more nodes for higher throughput even with ropey mains circuits.

But there have been more of the HomePlug AV 500 devices being exhibited on the floor; including D-Link's DIR-1565 "three-way" router which supports a network of 802.11g/n Wi-Fi, Gigabit Ethernet and HomePlug AV 500.

Also, the IEEE 1905.1 standard has been officialised thus simplifying the setup and management requirements for small

networks that use Wi-Fi, Ethernet, HomePlug or MoCA network media or a combination thereof. It also provides a consistent quality-of-service arrangement for data that passes through the different network media.

### Routers

Some of the manufacturers were pitching at the idea of "cloud-enabling" their routers. This was to allow for remote management of these devices or to allow the router to become an Internet-enabled file server. There was also some talk about setting up app platforms for routers, but what could this lead to for the evolution of these devices.

D-Link have launched the DIR-505 which is a 802.11g/n Wi-Fi plug-in travel router which also had the ability to work as an access point and file-server.

### Network-Attached Storage

TP-Link had used this show to launch their first NAS unit which was a DLNA-capable 2-bay SATA unit with Gigabit Ethernet connectivity as well as 3 USB ports. It even had the ability to copy from USB to NAS at the touch of a button.

Iomega had refreshed their StorCenter NAS lineup by adding a surveillance-camera NVR functionality and making them easy to setup. This also included improving their cloud-storage functionality. They also introduced the EZ Media & Backup Center which was their entry-level home-user NAS which supported easy-setup operation and backup, iTunes /DLNA media serving and support for Iomega's Personal Cloud and Iomega Link technology.

### Broadband Internet

ViaSat, who provide the satellite backhaul for JetBlue's inflight Internet service, were intending to launch a satellite broadband service for rural America this year. They wanted to use this show to exhibit their proposed service. This service is intended to be speed-competitive with the fastest terrestrial broadband services in the cities and is to be known as Exede.

The throughput is at a headline speed of 12Mbps download /3Mbps upload and they are offering packages with monthly rates US\$49.99 for 7.5Gb data allowance, US\$79.99 for 15Gb data allowance and US\$129.99 for 25Gb data allowance.

### Conclusion

This year, the Consumer Electronics Show in Las Vegas was about establishing a connected home lifestyle across all of the main activity centres ranging from the home office to the lounge area and that the TV is now a legitimate part of the connected lifestyle.

---

## Consumer Electronics Show

# 2012-Part 2

11/01/2012 11:43

## Audio and Video

### Smart TV

There is still intense interest in the smart-TV platforms where your TV is effectively a computer connected to the Internet. This is more so with the idea of integrating multiple viewing screens ie the large TV screen, one or more computer screens, and the screens on tablets and smartphones.

Sony have been dabbling with the Google TV platform, mainly in the form of network video peripherals rather than a TV, which I will mention below. Of course, they are still maintaining their Bravia platform. They were also to promote this concept in a Las Vegas wedding at the Bellagio Wedding Chapel[1] between "Bravia" (Sony's Internet TV platform) and "Sony Entertainment Network" (Sony's online content entity).

As far as the interactive-TV lineup goes, Sony have focused this function across their HX and EX "lounge-room" models with the HX series being ready for Skype once the user purchases an optional camera.

Samsung have devoted most of their press event to the TV being the "smart hub" of the connected home. This is with the use of a connected TV chassis that has a dual-core CPU, as well as building up the "Smart TV" platform around an app store and a video-content-distribution platform. They even are using an Android app as the TV's remote rather than supplying the remote with the TV set. They even ran a competition for the development of a multi-screen app which makes best use of the TV screen alongside a smartphone or tablet screen.

As well, Samsung put forward an "open-frame" design for TV sets with a user-upgradable computer processor. This is in a similar way to how the desktop computer has been designed and is underscoring the fact that these smart TVs are really large-screen computers in their own right and are expected to last for in the order of ten or more years.

Even Lenovo had come to the fore with a 55" LCD set that is driven by the Android "Ice Cream Sandwich" operating system. This would link to their own app store and cloud services and have the usual "smart-TV" features like Wi-Fi connectivity and ability to use an SD card as storage.

Similarly, a "fork" of the Ubuntu Linux distribution, which was targeted at the Internet-enabled TV set, had been launched at this show.

### Ultra-high-definition TV

Another main trend surfacing this year at the Consumer Electronics Show is ultra-high-definition TV, also known as UDTV or 4DTV. This is where images have a resolution of 3840×2160 pixels and is pitched at the very large screens of 103" and bigger.

LG is intending to demonstrate an 84" prototype set which works at this resolution while Sony even had the idea of having some of their Blu-Ray players upscale the 1080p video to the higher

resolution offered by this newer technology.

### 3D TV

The main trends affecting this technology are glasses-free 3D screens where you don't need to wear glasses to watch the 3D effect; use of cheaper cinema-style passive 3D glasses which don't need to link to the set or require batteries; as well as standards-based active glasses systems.

Toshiba is launching a glasses-free QFHD 3D TV

### OLED as a TV display technology

LG and Samsung have made efforts to bring the OLED display technology to the living-room TV size. Here, they have proven it by demonstrating 55" TV sets that use this technology rather than the LCD or plasma technologies for their screens.

There were rumours that Sony was to dump OLED technology for TV displays but they wanted to refine it to a cost-effective point for professional and consumer users. They have also shown a "Crystal LED" screen prototype which works in a similar vein to LED screens used in public places but implemented on 55" displays.

### Other TV news

Some classic names of respect are using this fair to strengthen themselves in the American market. Westinghouse have launched a 3D TV but none of their sets came with Internet-enabled TV functionality. This was to keep their sets at an affordable price point.

RCA had rebuilt their name on a large run of TVs for the North American market as well as fielding a 55" Internet-enabled TV for the Latin-American market. They were using this show to launch some Android-powered mobile TV sets for the up-and-coming "Dyle[2]" mobile /handheld terrestrial TV platform in North America.

Speaking of Dyle, Belkin and MCV were launching an array of equipment and accessories so that people can benefit from this mobile TV platform.

### Home-theatre and Hi-Fi

Samsung had used this show to launch two soundbars with iPod /Galaxy S /Allshare (DLNA) integration with one being based on hybrid valve /digital amplification technology. They also ran with two Blu-Ray-based home-theatre-in-box setups with "Disc-Digital" which is Samsung's implementation of the UltraViolet[3] "digital video locker" service as well as the 7.1 channel unit being based on the above-mentioned valve-digital hybrid amplification technology. The other 5.1 channel version implements a wireless link for the back speakers and both systems use Wi-Fi to link to the home network.

Samsung even launched a home-theatre soundbar which can become two speakers and could link to sources via HDMI ARC (audio return path from HDMI 1.4-compliant TVs) or Bluetooth A2DP. RCA also launched a similar soundbar that connected to the home network and worked as a network media player for Netflix and similar services.

They are also implementing the "Disc-Digital" UltraViolet

implementation across the Blu-Ray player lineup at this year's CES. One of the players is a similar size to a Discman and accepts discs through a slot while another of the players is a slimline form factor with HDMI inputs for TVs that don't have enough HDMI sockets.

Sony have shown two Google-TV-based network video peripherals, the NSZ-GS7 which is a network media adaptor and the NSZ-GP9 which is a Blu-Ray player. As well, they have released two DLNA-capable Blu-Ray home theatre systems with full access to the Bravia Internet TV platform as well as a home-theatre receiver. Sony also released a few "HomeShare" DLNA speakers that connect to the Wi-Fi home network and have audio content pushed to them.

Panasonic have run with a large lineup of Blu-Ray players and Blu-Ray home-theatre systems. All of these connect to the home network and support DLNA functionality but the 3D-capable models and the home-theatre systems provide full access to Panasonic's Viera Connect smart-TV platform including Skype and the Social Web for your existing TV.

These latest releases by Sony and Panasonic mean that you can use the cheaper and older TVs and have full access to the Internet-provisioned "smart TV" content and applications out there. In the case of the Panasonic 3D Blu-Ray players and home-theatres, add the Skype camera and you have just enabled a Skype-based video-conference setup,

Pioneer also used this show to launch the N-30 and N-50 audio-focused network media adaptors which work with DLNA 1.5 and Airplay network-media setups and the vTuner Internet-radio directory. They can handle 24-bit 192-kHz WAV or FLAC high-grade audio files and are Wi-Fi /Bluetooth ready with optional modules. The N-50 can also work as a high-grade digital-analogue converter for a CD player or MiniDisc deck.

## Cameras

Samsung, Sony and Toshiba had launched cameras that were capable of uploading images to cloud-based photo-sharing services without the need for a computer. In the case of Sony, their Bloggie Live and Bloggie Sports cameras were being pitched as an alternative to the smartphone's camera for Internet work.

Toshiba also exhibited a 3D camcorder with a built-in glasses-free 3D LCD screen so you can preview your 3D images properly. As well, Polaroid demonstrated a smartphone-style digital camera with a "proper" optical zoom lens - something that could be considered a bridge between a smartphone or digital camera.

## Personal Lifestyle

### Appliances

This show still hasn't become a North-American showground for domestic appliances in a similar vein to the Internationaler Funkaustellung in Berlin. But LG was using this show to promote their "SmarThing" range of network-connected "white goods" which could be monitored from a computer.

Of course, Samsung also demonstrated a washing machine and clothes dryer that used a colour LCD touchscreen but was able to

be controlled via an app on a smartphone. This means that you could track your washing from your phone's screen.

## Home Automation and Security

There has been some activity on this front mainly in the form of network-hardware vendors offering IP-enabled surveillance cameras, with TRENDNet offering a lineup of 12 units with varying features.

Other than that, the "Next Learning Thermostat" which learns your heating /cooling settings through the day was premiered at this show. Belkin also premiered the WeeMo home-automation system which is effectively an appliance-control module that responds to your smartphone.

## Personal Health Care

There has been some more effort in developing online personal-health-care equipment which interacts with your smartphone or home network.

Withings, previously known for their Wi-Fi-connected bathroom scales, have released a baby scales which also links with the same network enablement and online health-monitoring setup as these bathroom scales. Similarly iHealth have released a wireless body-fat scales along with a wireless blood-pressure monitor and a "Smart GlucoMeter" glucose sensor for your iOS device. As well, FitBits released the Aria Wi-Fi Scale which is bathroom scales that link to your home network and measure weight, body-mass index and body-fat percentage.

## IP Telephony

There has been some activity concerning voice and video Internet-based telephony. This is primarily with Skype being part of most of the "big-name" smart TVs and able to be added on to existing TVs through the use of this year's Panasonic 3D Blu-Ray players and home-theatre systems. But Samsung also launched a Skype HD videophone unit for TVs and Biscotti launched a similar device for their own service.

RCA had demonstrated their voice-based IP telephony systems for business use while Ooma launched a cordless VoIP phone which has a colour LCD screen and can sync to Facebook for "picture caller-ID" images. \$10 a month with the Ooma service provides for conferencing, second-line service and advanced call forwarding.

Tomorrow, in the last of the series, I will be talking about the network technologies that are to link these devices to the home network and the Internet.

## Links

[1] <http://www.bellagio.com/weddings/chapel.aspx>

[2] <http://www.dyle.tv/>

[3] <http://www.uvvu.com/>

# Internet telephony on the increase in Europe

11/01/2012 07:29

## Article

Internet-Telefonie in Europa auf dem Vormarsch - Telekom - derStandard.at (Austria - German language)[1]

## My comments

From this German-language article published in Austria, I had read that Internet-based telephony was gaining traction in Europe. The article was based on Bitkom's information which they sourced from Eurostat which is the European Union's statistics department.

IP telephony was found to be popular in the Baltic states like Lithuania but Germany was third behind the UK and France. Personally, I wouldn't put it past France to take this technology up due to the VoIP services being part of their "n-box" triple-play Internet

Most setups were based around an existing handset that was connected to an analogue-telephony-adaptor or router with integrated IP telephony gateway. As well certain call classes such as international calls and calls to mobile phones do attract the VoIP users most likely due to cost savings.

But I notice a gap in the information about whether the customers use VoIP at home or at work. This includes whether multi-site workplaces implement VoIP for tie-lines and whether users are using VoIP without knowing it due to dial-plans that are set up for particular call classes.

It is also worth knowing whether most European users really make use of the PABX-style features like call transfer on their home VoIP setups. This is more so as manufacturers implement these features in ATAs, Internet telephones and similar devices.

## Links

[1]

<http://text.derstandard.at/1325485842212/Internet-Telefonie-in-Europa-auf-dem-Vormarsch>

---

# Consumer Electronics Show 2012-Part 1

11/01/2012 07:01

This year, the Consumer Electronics Show in Las Vegas has achieved a record of 3100 exhibitors and has made an opening for newer technology companies. This is through the establishment of the "Eureka Park TrendZone" which had space for 94 of these startups.

For Microsoft, this year was their last appearance as an exhibitor and Paul Allen had given the last keynote speech for that company at the CES. They will simply work alongside their hardware and other software partners at further events.

## Trends

The major trends have been taking place with the portable and mobile computing aspect of our lives. This is mainly in the form of more powerful smartphones and tablets as well as an increased number of Ultrabooks - small slim ultraportable computers that snap at the heels of the MacBook Air.

## Technologies

### Energy-efficient powerful processors

This show is being used to premiere NVIDIA's Tegra 3 ARM processor, which is an improved processor for mobile devices. This is intended to allow for increased power and longer runtime for these devices. This processor isn't just intended for the tablets but also for use in the car dashboard as has been demonstrated with the latest Tesla electric supercar.

As well, Intel were premiering their Ivy Bridge "classic" processors which are optimised for improved graphics while being energy efficient. These processors are intended for the upcoming generation of laptops including the Ultrabooks.

### New operating environments for the regular computer

Microsoft were also demonstrating the Kinect gesture-driven user interface on the PC and this wasn't just for gaming like its initial Xbox 360 application was. They used this show to promote Windows 8 as being the next computer operating system for tablets and regular computers.

### Bluetooth Smart and Bluetooth Smart Ready

It was also the year that Bluetooth 4.0 a.k.a. Bluetooth Smart was being promoted. This was a very low-power Bluetooth specification which made the technology work properly with sensor applications due to allowing these devices to run on a pair of AA batteries or a watch battery for many months.

Bluetooth Smart Ready devices could work with these Bluetooth Smart devices and permit them to work in an energy-conserving way. This has legitimised the Bluetooth technology in personal health and wellbeing applications, with this application class being premiered at this show.

### Mobile Computing

One technology that is affecting this class of devices is the launch of LTE-based 4G wireless broadband in to most of the USA by many of the US mobile carriers. This is expected to allow for higher data throughput and bandwidth for the data-based services.

### Smartphones and Multifunction Internet Devices

One major brand change that occurred over this show was Sony's handheld-communications identity. This was previously known as Sony Ericsson but is now known simply as Sony Mobile Communications.

Here, Sony had launched the Xperia S Android phone and their first LTE-enabled phone in the form of the Xperia Ion. These are also to be "PlayStation capable" which allows them to run Sony's PlayStation games in the manner they are meant to be played.

They also released the Walkman Z series which is Sony's answer to the Apple iPod Touch and the Samsung Galaxy Player multifunction Internet devices.

Samsung had released their Galaxy S Blaze 4G which is their LTE-enabled iteration of their Galaxy S Android phones. LG also released some more of the Spectrum Android smartphones to the US market. Lenovo had launched the first Intel-powered Android smartphone in the form of the K800.

But, for the Windows Phone platform, the big announcement was Nokia's Lumina 900 which was a Windows Phone equipped with a 4.3" AMOLED touchscreen. Was this a way for Nokia to claw back in to the multifunction smartphone category again?

## Tablets

Here, this device class has become more powerful and capable, especially with the spectre of Windows 8 coming around the corner and a strong effort by all to unseat the iPad from its dominant position.

Toshiba had shown a 13" and a 7.7" prototype tablet but were exhibiting their 10.1" Android tablet/As well, Coby were launching 5 ranges of 7" and 10" Android Ice-Cream-Sandwich-powered tablets with the maximum having 1Gb RAM and 32Gb expandable flash memory.

Acer had launched the Iconia A700 series 10" tablets with Tegra quad-core horsepower, 5Mp rear camera and HD front camera, and driven by Android Ice Cream Sandwich.

Asus had launched the Transformer Prime Mini 7" Android 4.0 convertible Android tablet which could be similar to the EeePad Memo. This Android Wi-Fi tablet was a 7.1" 3D-screen-equipped unit with 5Mp rear camera /1.2Mp front camera, stylus and 64Gb flash storage.

Samsung had used this show to premiere the Galaxy Note to the US market and premiere the Galaxy Tab 7.7 LTE which was enabled for the 4G wireless broadband networks.

Sony had launched their S1 Android Homeycomb powered tablet. This one had a 9.4" screen and could work as an electronic picture frame or alarm clock; and was able to work with 4G LTE wireless broadband as well as Wi-Fi. Of course it would work with the DLNA Home Media Network and implemented an "off-centre-of-gravity" position for stability. They also showed the Tablet P clamshell tablet to the US market even though it was available in other markets. They weren't sure if it would be launched in the carrier-controlled US market.

## Regular computers

### Ultrabooks and other "traveller" notebooks

This year had been a changing year for the lightweight "traveller" notebook computer. This class of computer had seen the tablet computer appear as a serious competitor and Intel had defined the "Ultrabook" as a new lightweight slimline class of portable hotspot-surfing computer.

ASUS and Lenovo had exhibited convertible Ultrabook computers which could become tablets, with Lenovo's example known as the Ideapad Yoga which was powered with the Intel Ivy Bridge chipset.

Acer's next Ultrabook is the Aspire S5. This was claimed to be the thinnest Ultrabook and had an 8 hour battery runtime. It also had a USB 3.0 and Thunderbolt peripheral connect for use with higher-capacity hard disks for example. LG also launched the XNote Z330 Ultrabook as did Toshiba with the Portege Z835 and HP with the 14" Envy Spectre Ultrabook.

Lenovo were exhibiting their IdeaPad U310 (13") and U410 (14") Ultrabooks with a choice of processors but with 4Gb RAM and a choice of 64Gb SSD or 500Gb regular hard disk. The 14" U410 variant was also available with 1Gb NVIDIA graphics.

Dell has jumped in to the Ultrabook bandwagon with the XPS 13. This had the standard spec set with an Intel Core i5 Sandy Bridge processor, 4G on the RAM and a choice of 128Gb or 256Gb solid-state storage. The display is typically the 1366x768 resolution with Gorilla Glass screen as well as Bluetooth 3.0. Like the HP Folio 13 Ultrabook, this could be available in a "big-business package" with the business-security and customisation needs or as a regular consumer/small-business package.

Samsung launched their redesigned Series 9 ultrabooks with 13" and 14" models. These were powered by a Core i5 processor and were equipped with 4Gb RAM and 500Gb hard disk as standard. The 13" variant had a 128Gb SSD as an alternative option.

Of course, the Ultrabook and the tablet had placed doubt on the viability of the 10"-11" netbook. But Lenovo was one of the few who had pushed on with a netbook in the form of the S200 and S206 series. These 11.6" units are available with an AMD or an Intel Atom chipset and have 2Gb RAM and a choice of 32Gb SSD or 500Gb hard-disk secondary storage.

## Laptops

Of course, the regular 15"-17" laptop has not been forgotten about with the calibre of these computers approaching "multimedia" specifications. Most of the 17" units had 1080p resolution and were equipped with Blu-Ray as a standard or option for their optical disks. The hard disks came in the order of 1Tb or, in some cases, 2Tb and system RAM was in the order of 8Gb.

For graphics, most of the laptops on the show floor had NVIDIA graphics chipsets with display memory of 1Gb to 2Gb and able to operate in dual-chipset "overdrive" mode. Samsung even exhibited the Series 7 "Gamer" which was pitched as a thoroughbred clamshell gaming rig.

## In-car technology

This year was a chance for new startups to integrate the car with the Internet. MOG and Aha by HARMAN[1] have increased their "Web-to-radio" footprint by integrating CBS Radio into their Web content aggregation lineup and partnering with Honda, Subaru, JVC and Kenwood to increase their equipment availability. This is in addition to improving the Aha iOS app and porting this same app to the Android platform this year.

Similarly, Parrot have extended their "Asteroid" Android-driven in-vehicle infotainment platform to three different devices - the Asteroid CK which yields telephony and audio content, the Asteroid NAV which also provides GPS navigation and Internet access via Wi-Fi; and the Asteroid 2DIN which is effectively

a car-radio replacement by having integrated AM/FM/RDS tuners.

Stay tuned tomorrow for the next instalment of the Consumer Electronics Show 2012 series which will cover the networked lifestyle at home.

#### Links

[1] <http://www.aharadio.com/>

## Buyer's Guide-Component Network Media Adaptors

06/01/2012 06:56

### Introduction



[1]

Western Digital WDTV Live network media adaptor

There was a trickle of component network media adaptors which provide media playback from the Internet or home network to an existing audio-video system but this trickle has now become a flood over the past few years with equipment being offered at varying functionality and cost points.

For video content, most of these devices including some of the current-model Blu-Ray players may offer "over-the-top" TV services to existing TV equipment and this may avoid the need to buy a "smart TV" for this kind of content. This would appeal to those of us who would rather spend money on equipping our home theatres with a video projector or top-notch high-performing LCD TV rather than buying a "smart TV" to keep up with the Joneses. Similarly, these devices can expose a secondary TV like the one located in the secondary lounge area or master bedroom to the plethora of online content.

Similarly, you may want to invest in an audio-based network media player so you can enjoy Internet radio or music held on the network-attached storage through the hi-fi system. This is becoming more so as high-grade audio files of classic and

contemporary albums are being made available for sale and file-based audio content has now achieved hi-fi credentials.

### What are these devices

A component network media adaptor like the Western Digital WDTV Live[2] is designed to connect to existing audio and video equipment and show network-derived content on such equipment. Of course, they will work as a gateway to some Internet-hosted media services like IPTV /video-on-demand or Internet-radio services; and a few may work as a terminal for popular interactive Internet services like the Social Web.

If the manufacturer keeps investing in the device's platform, there may be the ability for newer content services to be added to an existing device. This typically is being achieved through a continual firmware update or an app store that works in a similar vein to a mobile platform's app store.



[3]

Sony BDP-S380 Network-enabled Blu-Ray player

Some of these adaptor devices also have functionality for access to legacy media like a radio or TV broadcast tuner and/or an optical disk player. An example of this is the Sony BDP-S380 [4] Blu-Ray player which I had reviewed. But these devices also have a USB port, iPod dock and /or memory card slot so that content held on any of these locations can be played through the device. Similarly, the Microsoft Xbox 360 and the Sony PS3 games consoles are able to serve as component network media adaptors as well as satisfying marathon TV games sessions.

A selection of these devices have an integrated hard disk and are able to work also as a media server. Some of them may allow you to add the media files by "ripping" from supported optical discs or recording broadcast material from an integrated tuner as well as accepting the content from the network or USB memory keys in a similar vein to the typical network-attached storage device.

### Two main classes



[5]

NAD c446 Network Media Tuner

There are two main classes of these component devices and the class they fall in to is based on the content they are designed to reproduce.

### **Video-optimised**

A video-optimised network media adaptor is designed primarily to reproduce video or still-image content on an attached TV or projector.

Key identifiers for this class of device include the presence of video connectors for a display device. These are typically HDMI, component or composite sockets alongside the audio sockets.

Another identifier is that there is a very small display on the unit itself which only shows content running time, or no display at all. The user is expected to operate the device using the remote control and looking at the attached video display device for visual feedback. This is common with very-low-end DVD players that don't have a track/time display and I once saw one of these players in operation at a party and the hosts had the TV on so they know which tracks to play on a CD.

Of course, if they have a legacy media source, it will typically be something like a DVD/Blu-Ray player or a digital-TV tuner. The online services available to this device would typically be the IPTV /video-on-demand /advanced-TV services and it may also work as a terminal for video-conferencing (with an add-on camera), interactive TV or the Social Web.

### **Audio-optimised**



[6]

Linn Majik DS network preamplifier

An audio-optimised network media device is designed primarily to reproduce audio content, especially music.

These devices have no video connections at all or they may use any such connections for a secondary purpose. It is augmented by the device having a display and controls on its front panel for selecting and playing content or a remote control with an LCD or OLED screen as its primary control surface. This means that the device won't be dependent on the use of an external video display for its operation.

If the device supports legacy content, it will use either a radio broadcast tuner and /or a CD /SACD player. They will also have access to audio-based Internet content sources like one of the Internet-radio directories like vTuner, Pandora or Last.FM.

## **What to look for**

### **Ethernet connectivity**

A component network media adaptor should have an Ethernet connection in order to provide for reliable playback of high-quality network and online content via Ethernet or HomePlug AV. You may get away with Wi-Fi wireless for Internet radio, CD-quality audio content, still images or standard-definition video content.

### **UPnP AV /DLNA**

As well, the device should support UPnP AV /DLNA functionality. The basic level of support for this functionality is to find and play media held on DLNA media servers using the device's control surface. On the other hand, a better-equipped device is able to play content that you push to it from another UPnP AV /DLNA control point like a lot of smartphone media-control software such as TwonkyMobile.

It also allows your device to be future-proof and is of importance whenever you look towards running specialist media-server equipment such as network PVRs on your home network.

### **Internet-media services**

Most low-end video-optimised equipment will support fewer Internet-video services but the mainstream-priced equipment from the big brands will offer access to the popular TV services in your territory like the catch-up-TV services and the big-time video-on-demand services like Netflix.

If a device has access to online interactive services like Facebook or Picasa, only one person will be able to operate their online service on the device at a time. This functionality may just be useful for showing pictures held on the user's online-service account but activities like updating the status comment on the service or simply logging in may be very difficult. This is due to the limited user interface that these devices offer as I have previously talked about.

### **Devices complementing each other**

Some of these network-media adaptor devices can complement each other. For example, you may use a newer adaptor that provides access to newer content services while you have an older adaptor that the manufacturers have given up on still able to provide some of the online and network-sourced media that you are after.

Similarly, you could use an audio-optimised network media adaptor for playing radio and music sources while you have an Internet-enabled TV or video-optimised network media player coming in handy for image and video content.

## **Conclusion**

The component network-media adaptor, whether in the form of a Blu-Ray player, set-top box or network-enabled tuner, can expose existing audio-video equipment to the world of online or network-hosted entertainment content.

## **Links**

[1]

[http://homenetworking01.info/wp-content/uploads/2011/06/2011-06-03-003-WDTV-Live.jpg#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://homenetworking01.info/wp-content/uploads/2011/06/2011-06-03-003-WDTV-Live.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed)  
[2]  
[/2011/06/product-reviewwestern-digital-wdtv-live-network-media-adaptor/#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://homenetworking01.info/wp-content/uploads/2011/06/product-reviewwestern-digital-wdtv-live-network-media-adaptor/#utm_source=feed&utm_medium=feed&utm_campaign=feed)  
[3]  
[http://homenetworking01.info/wp-content/uploads/2011/08/2011-08-25-019-Sony-BDP-S380.jpg#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://homenetworking01.info/wp-content/uploads/2011/08/2011-08-25-019-Sony-BDP-S380.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed)  
[4]  
[/2011/08/product-reviewsony-bdp-s380-internet-blu-ray-player/#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://homenetworking01.info/wp-content/uploads/2011/08/product-reviewsony-bdp-s380-internet-blu-ray-player/#utm_source=feed&utm_medium=feed&utm_campaign=feed)  
[5]  
[http://homenetworking01.info/wp-content/uploads/2011/10/2011-10-22-006.jpg#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://homenetworking01.info/wp-content/uploads/2011/10/2011-10-22-006.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed)  
[6]  
[http://homenetworking01.info/wp-content/uploads/2011/10/2011-10-22-013-Linn-Majik-DS-network-preamplifier-e1319465255919.jpg#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://homenetworking01.info/wp-content/uploads/2011/10/2011-10-22-013-Linn-Majik-DS-network-preamplifier-e1319465255919.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed)

---

## Guest Post: How Congress' spectrum bills hurt the tech community in 2011

27/12/2011 13:36

Getting Congress to agree on anything is a challenge. When it comes to spectrum bills there is disagreement on both sides with how the situation should be handled. In some instances it seems that the tech community would benefit from freeing up spectrum for the wireless industry. Yet with some of the limitations proposed, it could all end up in utter disaster.

The spectrum bills are trying to define who will have access to wireless broadband. In essence television broadcasters are being asked to give up at least part of their spectrum for mobile broadband. It seems like most favor this idea, but as is usually the case, the devil is in the details.

### Agreement

One thing everyone seems to agree on is providing both the spectrum and the funding for public safety entities. This national broadband network would make it possible for people to handle an emergency. In the case of 9-11 the network already set in place failed. There were issues with communication that ended up delaying some of the much needed help. With a national network, information would flow smoothly and at a much faster pace if a disaster did take place. Who wouldn't feel a sense of safety knowing that the people that take care of major issues and crisis have an open source of communication ensuring that they are more efficient in their duties?

### Disagreement

The spectrum bills asks television broadcasters to give up some of their spectrum. As an incentive, they would receive a portion of the auction price for that specific spectrum. Here's where things get tricky. In some instances, Congress is attempting to take more control of unlicensed wireless. While Wi-Fi and Bluetooth operate in this portion of unlicensed spectrum there is a threat to other potential opportunities for advancement. Ever heard of the Super Wi-Fi (also called White Spaces broadband)? There is no guarantee that these plans or ideas would be allowed to proceed under certain spectrum bills. This may close the door to future Wi-Fi developments.

Licensed bidders like several of the big internet service providers have the ability to bid on this open spectrum. While this does generate funds and gives these companies a larger range of access, it is the everyday person looking to take advantage of the wireless system that could lose out. He or she would have to gather together a large number of individuals and attempt to make a single bid as a collective group. Even with the latest technology, the chances of outbidding larger corporations seem slim.

The final oddity in some of Congress' spectrum bills is the geographic location issue. It is being suggested that people should bid on available spectrum in certain locations. A company may have access in one state and no access in another. It prevents a national system for everyone to take advantage of. Instead there would be a set of disconnected lines that can only be accessed from one specific location.

Progress seems to walk a fine line. On the one hand everyone wants to see improvement. The problem is that everyone wants that improvement to look different. Some internet service providers may want to make a bid for the spectrum, giving them unlimited access. Individual users have concerns that their own Wi-Fi will be hindered as there are regulations and rules for different entities in different parts of the country.

The tech industry needs an environment that is open to new discoveries. It is here that new technology is developed and offered up as progress and improvement to everyone. At this point there is no one spectrum bill that truly benefits the tech community as a whole.

**Author Bio : Sam Kirby** is a freelance content writer who develops articles on various topics. Sam's main interest lies however in developing articles related to Internet services and internet service providers[1].

### Links

[1] <http://www.broadbandexpert.com/high-speed-internet/>

# Another NBN backhaul link to reach Darwin

20/12/2011 02:31

## Article

Wayne Swan to hit switch on NBN regional link | The Australian [1]

## My Comments

Previously I mentioned a fibre link which would enable Darwin and Alice Springs to benefit from real competitive broadband[2] service like the rest of Australia. But there is another link which would serve Darwin that the Acting Prime Minister, Wayne Swan is about to switch on at the time of publication.

But this one would provide a link between Darwin and Toowoomba in Queensland; and would be part of the National Broadband Network. It would pass Mount Isa, Tennant Creek, Emerald and Longreach, thus "lighting up" these towns for real broadband.

One of the main reasons in enabling Darwin with these fibre-optic broadband backhaul links is to exploit Darwin's proximity to Asia. This means that Australia-Asia Internet links can be set up between these territories, allowing Australia to benefit from Asia being the newer business hub.

As these backhuls are laid down, it would be a chance to allow smaller communities to benefit from real Internet service. This is more so if there is encouragement for branch links to be extended out to the other communities that the trunks pass.

## Links

[1] <http://www.theaustralian.com.au/australian-it/telecommunications/swan-to-hit-switch-on-nbn-regional-link/story-fn4iyzsr-1226226128937>

[2] [/2011/11/adsl-internet-competition-arrives-to-darwin-and-alice-springs/#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](/2011/11/adsl-internet-competition-arrives-to-darwin-and-alice-springs/#utm_source=feed&utm_medium=feed&utm_campaign=feed)

---

# Internet-based health care—now a reality

19/12/2011 06:40

## Article

BBC News - Health care by TV and remote control[1]

## My Comments

The home network and the Internet is now becoming an essential part of personal health care in many ways thanks to a variety of technologies.

## Facilitation technologies

### Level playing field for health-care sensor devices

Certain technologies are making this feasible through the use of device classes for health-specific devices such as blood-pressure /pulse cuffs, blood sugar monitors and heart-rate monitors. They are also being enabled with low-voltage wireless technologies like Bluetooth Smart and up-and-coming low-voltage Wi-Fi designs.

These devices are being made able to work from two AA batteries or a 3V watch battery for a long time, yet use an industry-common data link and device class. The actual benefit from these design factors is the ability to supply health-care sensor devices that are cost-effective to buy and maintain; yet are able to integrate with common computing devices.

### Ubiquity of open computing platforms for this application

It is being extended with the availability of regular, mobile and TV-based computing platforms like Windows, MacOS X, iOS and Android as foundations for software that records and /or reports medical-status information.

The software can be designed to keep a local or cloud-based record and signal to health-carers and/or close relatives and friends if there are abnormal events. In some cases, details can be passed through immediately to the health-care professional who is supervising the patient.

### Where do I see this being applicable

I see this technology being applicable for the management of chronic illnesses where the patient can manage the illness themselves with little outside intervention. This may extend to the care of pregnant women who have a low risk of birth complications. Even when the patient must travel to the health-care professional for an appointment, both the professional and the patient are in a better position to know "what's going on" through the treatment process.

It also adds a sense of dignity to the care and treatment process by allowing one to integrate the management procedures in to their lifestyle without feeling awkward about it. This would benefit younger and middle aged people more so especially when they are encumbered with these illnesses like diabetes.

I see it also benefiting people living in rural areas in many ways. The telehealth technology can allow a specialist based at a small or larger town to manage multiple patients and only have to travel out to attend those at risk. As well, the patient wouldn't need to travel out to the doctor unless necessary.

It can also assist with the ageing process for seniors who want to live in their own home, live in an "own space" near their relatives such as a granny flat or live in low-needs supported retirement accommodation. Here, the technology can help with supervising medical and other therapies or simply make sure they are OK without intruding on their lifestyle and dignity. In this case, it could augment other technology projects that are in progress or being completed that assist older people with their daily lives.

Similarly, the technology would help with sports medicine in allowing athletes and fitness enthusiasts, along with their

trainers, know their limits and how they are performing through their workouts so they can exercise in an optimum way.

## Conclusion

I would still like to see the telehealth technologies work as a complement to the personal touch in personal health care rather than distance the patient from the professional. The technologies can be seen as a tool for helping us stay well and independent; as well as conquer distance.

## Links

[1] <http://www.bbc.co.uk/news/health-16091912>

---

# Product Review–Nokia BH-111 Bluetooth Audio Adaptor

16/12/2011 02:53

## Introduction

You have a pair of good-sounding B&O, Bose or Sennheiser headphones but want to use them as a full-blown headset with your smartphone. You may also want to try them with your laptop or desktop computer when you are playing a game or using a softphone app like Skype.

The only solution would be to buy a wired or Bluetooth headset that connects to the computer or phone. But these would make your good headphones redundant. Therefore you would need to look for an audio adaptor with an integrated microphone so you benefit from full handsfree communication.

The only problem with a lot of the wired audio adaptors supplied by the phone manufacturers and third-party accessories suppliers is that you may not be sure that they will work properly with your phone. This is more so if you jump mobile platform every time the contract expires. Similarly, wired audio adaptors can be hard to find because the only device to be seen using with your mobile phone is a Bluetooth headset.

There is also a greater risk of failure with wired audio adaptors as they are used in that the wiring at the device plug can be easily damaged through regular use and storage, thus impairing the quality of phone calls with these devices as I have experienced.

## The Nokia BH-111 Bluetooth Audio Adaptor itself



[1]

Nokia BH-111 Bluetooth headset adaptor fob — same size as SD card

But wait, I have come across the Nokia BH-111 Bluetooth Audio Adaptor which connects to a set of regular headphones, converting them in to a Bluetooth stereo headset. It comes with a set of in-ear earphones but these may come in handy as “emergency spares” or for compact-use requirements. It is available in three different colours - black, white and a “hot-pink” colour and retails for AUD\$50, making it fit within gift-pricing range.

This kit is centred around a small fob that houses a microphone, control buttons, rechargeable battery and Bluetooth transceiver. You can connect the supplied earphones or a pair of headphones to a 3.5mm stereo jack on the end of the fob’s “hinge pin” and this fob can clip on one’s shirt or tie like a lapel microphone.



[2]

Bluetooth headphone adaptor fob with headphone jack facing you

The operation buttons are each edge of the face of the fob, with one “multifunction” button that is used primarily to make or take calls, a previous-track button, a next-track button and a play-pause button that can mute the microphone during calls as well as start and stop the music. The hinge pin on this fob has a knob for adjusting the sound volume opposite to where the headphones are plugged in to.

When you charge this Bluetooth audio adaptor, you plug the supplied battery charger or a USB-2.5mm DC cord in to the side of the “hinge pin”; and it doesn’t take long to charge this adaptor.

The Nokia BH-111 complies to the following Bluetooth device classes: Hands-Free Profile, Headset Profile, A2DP audio playback profile and AVRCP audio controller profile. It can store pairings for up to five physical devices at a time and can only connect to one Hands-free or Headset Profile device and one A2DP /AVRCP audio-player device at a time. This could allow you to work it with a Bluetooth smartphone and a separate Bluetooth-capable MP3 player at the same time.



[3]

Now these good headphones work as a stereo Bluetooth headset for your smartphone

The clip can be very stiff and hard to attach to a thick tie or suit coat but can work with most shirts. But it doesn't look like something that could break easily after regular usage.

### Setup and Usage

You have to use the "multifunction" button to turn the unit on and off as well as make it open for pairing. Here, you have to turn the audio adaptor off, then hold the multifunction button down until you hear a five-beep sequence, followed by a silence then a distinct beep. Then you start your device in "Bluetooth-device-scan" mode and it will show up as "Nokia BH-111" on the device's user interface.

On the other hand, you hold the multifunction button down until you hear the five-beep sequence complete, then release this button in order to turn the audio adaptor on.

The Nokia BH-111 can act in a very confused manner if two or more devices that are paired with it are in the vicinity. This can happen more so if it is still connected to a mobile phone while a computer associated with it is nearby.

When the phone rings, you hear the Nokia ringtone rather than your handset's ringtone, which can be confusing when you take a call through the audio adaptor for the first time and your phone plays its own ringtone through its speaker. I would rather that the phone's ringtone plays through the headphones when a call comes in.

### Battery Runtime and Sound Quality

For battery life, the Nokia BH-111 audio adaptor can complete a day of music-playback use with a Bluetooth mobile phone and longer in a quiescent state. It works properly and clearly when making and taking calls - the caller can hear and understand my voice properly and I can hear their properly as if I was using the phone handheld. I noticed this more with quieter environments but the intelligibility for the sound degrades if I was in a noisier environment.

The audio quality for music playback doesn't change from what is offered by a wired connection to the phone, although there may be jitter occurring if the phone is "overloaded" with other tasks.

### Limitations and Points Of Improvement

The clip could be improved on with a lever-type action similar to a clothes peg so it can easily clip to thicker material such as winter clothing or formal wear. The functions could also be marked in a colour inverse to the finish so it is easier to discover them.

It could be beneficial for a device like the Nokia BH-111 to have a 3.5mm input jack so you can connect other personal-audio devices to this adaptor, with the call audio from the Bluetooth phone cutting over sound from the connected personal-audio device. This could benefit people who use a high-capacity iPod Classic or similar device as their music library, listen to broadcast content from a personal radio or play content on legacy formats like cassettes or CDs using a device like a Walkman or Discman.

Similarly I would like to see a function that allows the audio adaptor to work as a speakerphone when connected to other audio equipment that uses speakers rather than a set of headphones. This may appeal to those of us who want to connect it to a car sound system via the AUX-IN jack or cassette adaptor for cassette-based equipment and use Blu-Tack to secure the fob to the dashboard for a high-quality reliable Bluetooth handsfree /music-player setup in a borrowed or hired vehicle.

An improved unit could implement a microphone array as a way of focusing the sound on the user's voice in a phone conversation, and could place this leagues ahead of the typical Bluetooth headset.

### Conclusion

The Nokia BH-111 headphone adaptor is infact the first product of its kind on the market that permits one to use their favourite headphones as a reliable calls-and-music Bluetooth headset for their smartphone especially if they use it for more than just phone calls.

### Links

[1]

[http://homenetworking01.info/wp-content/uploads/2011/12/2011-12-12-013-Nokia-BH-111-with-SD-card.jpg#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://homenetworking01.info/wp-content/uploads/2011/12/2011-12-12-013-Nokia-BH-111-with-SD-card.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed)

[2]

[http://homenetworking01.info/wp-content/uploads/2011/12/2011-12-12-014-Nokia-BH-111-with-SD-card-and-headphone-jack.jpg#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://homenetworking01.info/wp-content/uploads/2011/12/2011-12-12-014-Nokia-BH-111-with-SD-card-and-headphone-jack.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed)

[3]

[http://homenetworking01.info/wp-content/uploads/2011/12/2011-12-12-015-Nokia-BH111-with-headphones.jpg#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://homenetworking01.info/wp-content/uploads/2011/12/2011-12-12-015-Nokia-BH111-with-headphones.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed)

# The idea of the convertible ultrabook becomes real with ASUS

15/12/2011 04:18

## Articles

Asustek to showcase swivel-screen notebook at 2012 Computex | DigiTimes[1]

Un ultrabook convertible chez Asus ? | Le Journal Du Geek (France - French language)[2]

## My Comments

A question that many people will be pondering nowadays when they consider a secondary computing device is whether to get a small laptop computer like a netbook or Ultrabook or a tablet computer like the iPad along with an accessory keyboard. There will be the tradeoffs of each platform such as software availability and user-interface requirements.

This will become more so when Windows 8 with its Metro touch user interface being part of the operating system and becoming another full-bore competition to the Apple iOS platform.

But ASUS have answered with an Ultrabook that can bridge between the notebook /laptop and tablet form factors in the cost-effective and power-efficient way that has been required of the Ultrabook. This machine will be the first “convertible” Ultrabook that has the “swivel-head” screen design like what I have experienced with the Fujitsu TH550M [3]convertible notebook.

This will work tightly with the integrated touchscreen interface that Windows 8 provides rather than the previous practice where the manufacturers fabricated their own touch-optimised shell for these computers.

The ASUS convertible Ultrabook could offer a tablet-style user interface for casual computing needs yet have the full proper keyboard that would appeal to us when working on emails or documents; yet it will have the benefits that tablets like the iPad offer like quick start-up and long battery runtimes.

The main question is that whether other manufacturers would make the convertible Ultrabook form factor and make these computers cost-effective and widely available or will they be taken in by just supplying tablets as a distinct touchscreen product class?

## Links

[1] <http://www.digitimes.com/news/a20111209PD209.html>

[2]

[http://www.journaldugeek.com/2011/12/09/ultrabook-convertible-asus/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+LeJournalDuGeek+%28le+Journal+du+Geek%29](http://www.journaldugeek.com/2011/12/09/ultrabook-convertible-asus/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+LeJournalDuGeek+%28le+Journal+du+Geek%29)

[3]

[/2011/07/product-reviewfujitsu-lifebook-th550m-convertible-netbook-computer/#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](/2011/07/product-reviewfujitsu-lifebook-th550m-convertible-netbook-computer/#utm_source=feed&utm_medium=feed&utm_campaign=feed)

# Renault debuts in-dash Android system concept with app market

15/12/2011 04:10

## Article

Renault debuts R-Link, an in-dash Android system with app market — Engadget[1]

## My Comments

The Android operating system isn't just in your hands anymore with a tablet or smartphone. Renault has made sure it will be in the dashboard of the car, together with an app store to back the concept.

There is a main questions that I have about the concept at the moment. One is whether the system will use an updatable wireless-broadband link or a Wi-Fi network or both for data transfer to and from the network?

But what I see of the idea is the main use of the apps for driver and passenger entertainment, in the form of DLNA-based synchronisation of media with the home network, Internet radio (vTuner and similar Internet-radio directories, Last.FM, Pandora, etc) and similar applications. But there are other app ideas like advanced navigation including “book-ahead” functionality and roadside-telematics integration, and car statistics monitoring.

There could even be the ideas of using this Android platform to integrate the vehicle with home automation. The most obvious scenario that would come to mind would be looking at the dashboard to know whether the garage door that should be closed is infact closed and then touch a button to close it. This could avoid the need to look at the rear-view mirror as you drive out to check on the garage.

At least this effort by Renault with the Android platform could become a platform for developing in-vehicle infotainment and telematics systems and applications.

## Links

[1]

<http://www.engadget.com/2011/12/09/renault-debuts-r-link-an-in-dash-android-system-with-app-market/>

# British Telecom to touch Scotland and Wales with fibre-optic technology

14/12/2011 03:14

## Article

BT fibre rollout reaches Scotland, Wales • The Register[1]

## My Comments

British Telecom are now touching Scotland and Wales with their fibre-based next-generation-broadband services.

These will use a combination of fibre-to-the-cabinet and fibre-to-the-home deployment setups depending on the location. They wanted to have 34 exchanges in Scotland and 16 exchanges in Wales fibre-ready by 2012 with two thirds of UK premises passed by their fibre-optic network by 2014. This is part of their bid for the latest round of Broadband Delivery UK funding.

How I see it is that the upgrades are happening in the face of various local-focused rural-broadband-enrichment activity that is taking place through various parts of rural UK. In some cases, it could lead to the creation of competitive next-generation broadband like what is occurring in France where providers can compete on an infrastructure level. It may then put BT "on notice" about the pricing and quality of their service as far as consumers and retail Internet providers are concerned due to the availability of this competing Internet infrastructure.

At least these kind of rollouts could then allow for vibrant competition in Internet service delivery in the UK.

## Links

[1] [http://www.theregister.co.uk/2011/12/12/bt\\_178\\_exchanges/](http://www.theregister.co.uk/2011/12/12/bt_178_exchanges/)

# Hitachi outs a pair of 4TB HDDs for your storing pleasure — Engadget

14/12/2011 01:57

## Article

Hitachi outs a pair of 4TB HDDs for your storing pleasure — Engadget[1]

## My Comments

Hitachi has raised the ante again for hard-disk storage by delivering a 4Tb 3.5" hard-disk unit. They have packaged it as a retail-sold aftermarket retrofit kit with SATA connectivity for around US\$399 and as a USB 3.0-connected external hard disk for US\$420.

The Engadget article went on about us thinking of cloud storage as the way to go for personal data storage and that it would please those of us who place emphasis on desktop-local or NAS-hosted data storage. This would include most business

operators who want direct control over their business data. I also see this hard disk as being relevant to the network-attached storage sector where you place emphasis on data capacity with these devices as they become local warehouses for high-definition video, high-quality music and high-resolution photos.

A question that may need to be raised with NAS applications is whether the NAS's firmware /operating-system can address unique physical disks with a capacity of 4 or more terabytes. Here, I would suspect that most Linux-based firmwares could do so but even if the current firmware can't address the 4Tb or more physical disk, a subsequent version could support the volume size.

Of course, as more hard-disk plants in Taiwan get back to full steam after the floods and more of the 4Tb hard disks come on the market, the prices could reduce where this capacity becomes more reasonable for home and small-business users. Other interesting factors that could come of this include the development of single-unit 2.5" hard disks with capacities of 1Tb or greater or smaller hard-disks with higher capacities that would appeal to those of us with a need for higher mobile data capacity.

## Links

[1]

<http://www.engadget.com/2011/12/13/hitachi-outs-a-pair-of-4tb-hdds-for-your-storing-pleasure/>

# Acer-to stay on with the netbook

13/12/2011 07:25

## Articles

Acer will stop making cheap crap, but keep selling netbooks. Discuss. — Engadget[1]

Acer VP: 'We're never gonna give netbooks up, let them down, run around and desert them' | Engadget[2]

## My Comments

These articles had outlined the way the development of portable computers has become and the way Acer has stood on with the netbook computer even though other companies are dumping this product class and focusing on ultrabooks and tablets. This has been emphasised with their classy Aspire One series of netbooks which also use Android as an alternative operating system. Here they have worked on this product class and refined it so that it isn't an ordinary product anymore.

On the other hand, Windows 8 and its "Metro" touchscreen user interface may legitimise the convertible notebook form factor where the notebook has a touchscreen on a swivel so it can be turned in to a tablet, an example of which is the Fujitsu TH550M [3]which I reviewed previously. If Acer had developed a convertible netbook that had the touchscreen and ran Windows 8, they could create a perfect "bridge" product.

This is where one could benefit from a proper keyboard for text

entry will have a 10" touchscreen like all the good tablets have. It is in a similar way to how camera manufacturers have established the "bridge" cameras which could work as point-and-shoot cameras but had increased levels of configurability for advanced photographers, with some such cameras being able to work with accessory lenses or flashguns.

#### Links

- [1]  
<http://www.engadget.com/2011/12/09/acer-will-stop-making-cheap-crap-but-keep-selling-netbooks-dis/>
- [2]  
<http://www.engadget.com/2011/11/29/acer-vp-were-never-gonna-give-notebooks-up-let-them-down-ru/>
- [3]  
[/2011/07/product-reviewfujitsu-lifebook-th550m-convertible-netbook-computer/#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://2011/07/product-reviewfujitsu-lifebook-th550m-convertible-netbook-computer/#utm_source=feed&utm_medium=feed&utm_campaign=feed)

---

## Security issues concerning field-updatable device software raised in HP lawsuit

13/12/2011 06:09

#### Article

HP sued over security flaw in printers | Security - CNET News[1]

#### My comments

An increasing trend that I have covered on this site and have noticed with equipment that I have reviewed is for the equipment to be updated with new firmware after it is sold to the customer.

#### Field-updating practices

Previously, this practice involved the device's user using a regular computer as part of the update process. In a lot of cases, the user would download the update package to their computer and run a special program to deploy the update to the connected device. If the device, like a router, was connected via the network, the user uploaded the update package to the network-connected device via its management Web page or other network-file-transfer methods.

Now it is becoming more common for one to update the software in their device without the need to use a regular computer. This would be done using the setup options on the device's control surface to check for and, if available, load newer firmware.

It also includes the device automatically polling a server for new firmware updates and inviting the user to perform an update procedure or simply updating itself during off-hours for example; in a similar vein to the software-update mechanisms in Windows and MacOS.

As well, an increasing number of devices are becoming able to acquire new functionality through the use of "app stores" or the installation of add-on peripherals.

#### The HP lawsuit concerning printer firmware

Just last week, there has been a lawsuit filed against HP in San Jose District Court, California, USA concerning weaknesses in the firmware in some of their printers allowing for them to accept software of questionable origin. Issues that were raised were the ability to load modified software that could facilitate espionage or sabotage. This was discovered through lab-controlled experiments that were performed on some of the affected printers.

As all of us know, the firmware or apps are typically held on servers that can be easily compromised if one isn't careful. This has been made more real with the recent Sony PlayStation Network break-ins, although data pertaining to users was stolen this time. But it could be feasible for a device to look for new firmware at a known server and find compromised software instead of the real thing.

They even raised the question not just about the software that is delivered and installed using a computer or network but the ability to install ROM or similar hardware chips in to the device to alter its functionality. I would also see this including the ability to pass in code through "debug" or "console" ports on these devices that are used to connect computers to the devices as part of the software-development process.

This could have implications as equipment like home appliances, HVAC /domestic-hot-water equipment and building security equipment become field-programmable and join the network all in the name of "smart energy" and building automation. Issues that can be raised include heaters, ovens or clothes dryers being allowed to run too hot and cause a fire or building alarm systems that betray security-critical information to the Social Web without the users knowing.

#### Further ramifications of this lawsuit

Device manufacturers will have to look at the firmware that governs their products in a similar vein to the software that runs regular and mobile computing equipment. This includes implementing authenticated software delivery, software rollback options and the requirement to keep customers in the loop about official software versions and change-logs (differences between software versions).

In some cases, business computing equipment like laser printers will have firmware delivered in a similar manner to how computer software is rolled out to regular computers in larger businesses. This includes software that enables centralised firmware deployment and the ability to implement trial-deployment scenarios when new firmware or add-on software is released.

Devices that have proper-operation requirements critical to data security or personnel /building safety and security may require highly-interactive firmware delivery augmented with digital-signature verification and direct software-update notification to the customer.

Similarly, security-software vendors may push for a system of integrating software solutions, including "edge-based" hardware firewall appliances in the process of software delivery to other devices.

## Conclusion

What I would like to see out of this case if it is allowed to go “all the way” is that it becomes a platform where issues concerning the authenticity, veracity and safety of field-updatable firmware for specific-purpose devices are examined.

## Links

[1]

[http://news.cnet.com/8301-1009\\_3-57339885-83/hp-sued-over-security-flaw-in-printers/?tag=nl.e757](http://news.cnet.com/8301-1009_3-57339885-83/hp-sued-over-security-flaw-in-printers/?tag=nl.e757)

# Product Review-HP Photosmart 7510 multifunction inkjet printer

12/12/2011 05:30

## Introduction

I am reviewing the new HP Photosmart 7510 multifunction inkjet printer which is the top-end model of the new Photosmart lineup. It has been redesigned in a manner to make it more suitable for home use with an emphasis on it being in the living areas of the house. Of course, it will have the printing, scanning and copying abilities and is a citizen product of the Internet-edged home network with HP’s ePrint email-to-print and Apple’s iOS AirPrint functionality.



[1]

## Print Scan Copy Fax /

**E-mail Paper Trays Connections** Colour Colour Colour Colour  
1 x A4, 1 x 4x6 photo USB 2.0 Ink-jet Resolution Copy preview,  
Auto-optimise copy functions HP ePrint email-to-print Options  
802.11g/n WPS Wi-Fi wireless Auto-duplex Automatic Document  
Feeder UPnP Printer Device

## Prices

## Printer

Recommended Retail Price: AUD\$249

## Inks and Toners

Standard **High-Capacity** Price Pages Price Pages Black  
AUD\$18.70 250 AUD\$51.20 800 Cyan /Colour AUD\$16.76 300  
AUD\$29.56 750 Magenta AUD\$16.76 300 AUD\$29.56 750 Yellow  
AUD\$16.76 300 AUD\$29.56 750 Photo black AUD\$16.76 1500  
AUD\$29.56 4500

By the way, it is also worth noting that Officeworks[2] does sell a pack of black, cyan, magenta and yellow high-capacity cartridges for AUD\$110 at the time of publication.

## The printer itself

The HP Photosmart 7510 is finished in that very dark brown colour which may be described as either “antique brown” or “coffee brown”. This is part of the new “earthy-brown” colour trend for interior design but the colour would allow the printer to blend in well with living areas that are replete with the antique or classic wooden furniture.

Unlike the typical inkjet printer, this multifunction printer is set on a base that extends to the length of what would be the typical A4 paper tray on these printers. The front of the plinth drops down smoothly just by you lifting a perspex lid in the area where documents would land when they are printed. There is another part of that lid which exposes the photo-paper tray for when you turn out snapshot photos. This may limit its ability to be positioned on the top of narrow furniture but would make it look the part on that desk, sideboard or large upright piano.

Part of being the top-end model of the Photosmart home inkjet printer series, the Photosmart 7510 is equipped with a low-profile automatic document feeder that would come in handy with scanning or copying documents. US-supplied models have access to the eFax service which allows for Internet-driven “virtual fax machine” functionality.



[3]

## Touchscreen control panel

As part of the recent trend for HP Photosmart and OfficeJet printers, you control the Photosmart 7510 using a touchscreen. This improves the useability of these printers through the setup phase and when you want to do any printing or copy jobs at the printer.

Like all the other recent Photosmart printers that I have

reviewed, this printer uses the 564 and 564XL ink cartridges. This means that you have the benefit of the multi-cartridge colour printing that they offer, thus making them economical to run.

### Setup and Network Connectivity

The only network connection for the HP Photosmart 7510 printer is a Wi-Fi connection. If you enrol it with your Wi-Fi home network from the control panel, it doesn't recognise punctuation in passphrase entry. Therefore, you have to use USB-Wireless setup procedure from your computer to enrol it with non-WPS networks that use punctuation in their passphrases.

Similarly, the Photosmart printer doesn't support IPv6 connectivity, which is a common amongst network equipment targeted at the home user. This is even as IPv6 is becoming more relevant with the home network especially with next-generation broadband services. On the other hand, this printer does work as a UPnP-compliant printing device[4], a feature that should be exploited with digital cameras and interactive-TV applications.

Other than that, this printer makes the setup very easy, through the use of animations to show you through preparation procedures.

### Walk-up functions

This HP printer supports the full gamut of HP ePrint functions like email-to-print and printer apps. It can also work with the AirPrint mobile-print setup for Apple iOS devices.

There is the option to preview your original on the control panel screen when you scan or copy from the scanning platen. You can't do this for documents scanned from the automatic document feeder. Other than that, it doesn't have copying functions that business would find handy like ID copy.



[5]

Head-on view with paper door and SD card slot on front of base

Like other multifunction printers, this printer has a camera-card slot on the front of its plinth so you can print from your digital camera's card or scan documents to a memory card.

### Computer functions

When it came to installing the printer's software, I didn't have any trouble with this. Even having to move the printer from USB to Wi-Fi operation was a relatively smooth operation.

The driver software doesn't take up much memory space or processor time thus not impairing the computer's performance.

Even the scan monitor had behaved very consistently, accepting jobs that were started from the printer's control surface and turning them out without "taking over" the computer. This was in fact a more reliable experience than what I have had with previous HP software.

### Printer useability and output quality

There is significantly reduced noise level from the HP Photosmart 7510 during a print job compared to earlier Photosmart printers, with no distinct noise from printhead marking the paper. This is more so when turning out regular documents. But the printhead noise may be noticeable during photo printing.



[6]

Automatic document feeder

There have been some improvements on the automatic-duplexing front. The time that it takes to "flip" the page to print on the other side has been reduced to around 5 seconds, thus making a reduction in the time penalty for printing both sides. But, like with other HP inkjet printers with this feature, the Photosmart still requires a margin at the top and bottom of the page for this function to work.

The text and graphics on regular documents is very sharp, more on a par with the other Photosmart predecessors. As for photographs, they come out with a slightly dark image with reduced contrast. Some colours like the reds stand out more but blues are not all that strong. As well, you don't have the vivid flesh tones.

### Limitations and Points for Improvement

One omission that I have about the Photosmart 7510 is that it could have a walk-up USB socket on the front for printing from PictBridge-capable cameras, USB memory keys and card readers for future card formats. It could also benefit from an Ethernet socket on the back so it can work with other network technologies like HomePlug.

As for the auto-duplex functionality, HP should look at the issue of having its Photosmart and OfficeJet inkjet printers be able to print "to the edge" of the paper when printing both sides. This

would make the function not just as a “green” function but more so as a desktop-publishing aid when it comes to printing documents where alignment on both sides is critical.

### Conclusion and Placement Notes

I would recommend the HP Photosmart 7510 printer as a household printer for a busy household, especially if there are many guests coming through; including the previously-mentioned “family house” scenario. This is due to using the efficient five-cartridge printing mechanism which allows you to buy the colours that you need. It would work well as a SOHO printer for those of us who don’t rely on fax technology and fit in with those houses where there is high value being placed on aesthetics; especially if there is a lot of that antique furniture in place.

### Links

- [1]  
[http://homenetworking01.info/wp-content/uploads/2011/12/2011-12-12-001-HP-Photosmart-7510.jpg#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://homenetworking01.info/wp-content/uploads/2011/12/2011-12-12-001-HP-Photosmart-7510.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed)
- [2]  
[www.officeworks.com.au#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://www.officeworks.com.au#utm_source=feed&utm_medium=feed&utm_campaign=feed)
- [3]  
[http://homenetworking01.info/wp-content/uploads/2011/12/2011-12-12-004-HP-Photosmart-7510-control-panel.jpg#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://homenetworking01.info/wp-content/uploads/2011/12/2011-12-12-004-HP-Photosmart-7510-control-panel.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed)
- [4]  
[/2011/03/encouraging-the-use-of-the-upnp-printer-device-class/#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://2011/03/encouraging-the-use-of-the-upnp-printer-device-class/#utm_source=feed&utm_medium=feed&utm_campaign=feed)
- [5]  
[http://homenetworking01.info/wp-content/uploads/2011/12/2011-12-12-010-HP-Photosmart-7510-head-on.jpg#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://homenetworking01.info/wp-content/uploads/2011/12/2011-12-12-010-HP-Photosmart-7510-head-on.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed)
- [6]  
[http://homenetworking01.info/wp-content/uploads/2011/12/2011-12-12-008-HP-Photosmart-7510-loaded-deck.jpg#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://homenetworking01.info/wp-content/uploads/2011/12/2011-12-12-008-HP-Photosmart-7510-loaded-deck.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed)

---

## The recent Telstra security breaches—how were they handled?

12/12/2011 02:59

Through this last year, there has been an increasing number of incidents where customers of high-profile companies have had their identifying data compromised. One of these incidents that put everyone in the IT world “on notice”, especially those involved in consumer-facing IT like ISPs or online services, was the Sony PlayStation Network /Qriocity break-in by LulzSec /Anonymous.

Close to that, I had attended a presentation and interview concerning the security of public computing services hosted by Alastair MacGibbon and Brahman Thiyagalingham from SAI Global, the report which you can see here[1].

### The BigPond incident

Over the last weekend, Telstra[2] had suffered a security breach that compromised the user details of some of their BigPond[3] Internet-service customer base. This was through a customer-service search Webpage being exposed to the public Internet rather than Telstra’s own customer-service network.

The privacy compromise was discovered on Friday 9 December 2011 (AEDT) and mentioned on the Whirlpool forum site. It was in the form of an in-house “bundles” search page exposed to the Web with the database containing usernames, passwords and fully-qualified email addresses of a large number of the customer base at risk.

### Telstra’s response

But Telstra had responded very quickly by locking down the BigPond customer email servers and Web-based self-service front-ends while they investigated the security compromise. The customers whose data was exposed had their passwords reset with them being required to call the BigPond telephone support hotline as part of the process.

As I do maintain an email account through this service for a long time, I had taken steps to change the password on this account. This was even though I wasn’t one of the customers that was subject to the aforementioned mandatory password reset.

Telstra also maintained a live channel of communication to its customers through their own Web sites, through updates to the main media channels and through an always-running Twitter feed. Once the email system was open for business, a follow-up email broadcast was sent to all BigPond customers about what happened.

### My comments on how this was handled

Like the Sony PlayStation incident, this incident was one that affected a high-profile long-established brand which, like other incumbent telecommunications-service providers, was in a position where the brand has a bittersweet connotation. Here the brand is associated with a portfolio of highly-established high-quality stable telecommunications services but has had negative associations with poor customer service and expensive telecommunications services.

What I saw of this was that after the Sony incident and similar incidents against other key brands, the IT divisions for Telstra haven’t taken any chances with the data representing their customer base. They had quickly locked down the affected services and forced the necessary password-reset procedures in order to reduce further risks to the customers; as well as keeping customers and the public in the loop through their media, Web and Social-Web channels.

The Telstra incident also emphasised the fact that the risks can come from within an affected organisation, whether through acts of carelessness or, at worst, deliberate treacherous behaviour by staff. As I have said in the previously-mentioned interview and conference article[4], there needs to be data protection legislation and procedures in place in Australia so that a proper response can occur when these kinds of incidents occur.

### Links

[1]  
/2011/10/interview-and-presentationsecurity-issues-associated-wi  
th-cloud-based-computing/#utm\_source=feed&utm\_medium=fee  
d&utm\_campaign=feed

[2] <http://www.telstra.com.au>

[3]  
[www.bigpond.com#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://www.bigpond.com#utm_source=feed&utm_medium=feed&utm_campaign=feed)

[4]  
/2011/10/interview-and-presentationsecurity-issues-associated-wi  
th-cloud-based-computing/#utm\_source=feed&utm\_medium=fee  
d&utm\_campaign=feed

## Buyers' Guide–Network-Attached Storage

07/12/2011 00:56

### Introduction



[1]

Netgear ReadyNAS as a music server

A new class of hardware has been brought about by the networked home and small office environment. This is in the form of the network-attached storage device which works simply as a hard disk that is attached to the small network, sharing its resources using common network protocols.

### Description

A network-attached storage device or NAS is an appliance that connects to your home or small business network via Ethernet to serve as a communal storage device for that network. This is instead of purposing an older computer for this role of a common storage device.

One main advantage of these devices is that these devices don't

demand as much power as a regular desktop computer running as a server and they make less noise than the typical ATX desktop tower computer. Therefore they need less power to run and don't need to have a constantly-running fan. This also leads to a device that is quiet and energy-efficient, values that are being asked of in this era.

The devices are typically very small, often ranging in size from a pair of cassette tapes through a small book to the size of a kitchen toaster for the small-business units. This means that they don't take up much desk space and can even be hidden behind other computing devices, which also puts them in the good books with those who value aesthetics. This small size also wins favour with those of us who want a data storage to serve multiple devices but that can be quickly shifted to a location at a moment's notice; as I have seen for myself at the Australian Audio and AV Show[2] with a few of these devices working as DLNA-compliant media servers for demonstration hi-fi equipment. Infact the pictures of the Netgear ReadyNAS and the Seagate GoFlex Home NAS units are images of fully-operational units serving this aforementioned role, with the Seagate single-disk unit being photographed on the floor and it being slightly higher than the skirting board.

### Disk Storage

#### Single-Disk NAS



[3]

Seagate GoFlex Home single-disk NAS

Cheaper consumer-focused NAS units are typically equipped with one hard disk with a few of these units like the Seagate GoFlex Home[4] being a network bridge for a removeable hard-disk module that is part of the manufacturer's modular-hard-disk system.

This also includes the portable NAS units like the Seagate GoFlex Satellite[5] that are their own Wi-Fi network and are intended to work as a data offloading device for tablet computers.

But on the other hand, there are some single-disk NAS units like

the QNAP[6] range that can excel as highly-capable network storage hubs. In the case of the QNAP, these units are able work as full-flight Web servers suitable for serving intranets or “proving” Web-site prototypes; or pull off other advanced network-storage tricks.

### **Multi-Disk NAS**

On the other hand, the better units will support two or more hard disks which work the installed hard disks as a RAID (Redundant Array of Independent Disks) that facilitate either extra capacity, higher data throughput or increased fault tolerance. These multi-disk units can be set up to have two hard disks of equal capacity “mirroring” each other as a safeguard if one disk fails or to facilitate high-throughput low-latency data transfer. On the other hand, the disks can be seen simply as a large volume of data. Units which support three or more disk drives can support disk setups that combine failsafe data storage and increased data capacity.

Some multi-disk units like the Netgear ReadyNAS[7] units have the ability to support in-place volume expansion. This is where you can add extra hard drives to the NAS while it is running in order to build up redundant failover storage or increase system capacity. But other systems will require the NAS to be taken out of service if you intend to evolve the multi-disk RAID volume.

### **User-installed disks and upgrade options**

Most of these NAS units have the hard disk integrated, which is at a known capacity whereas others, commonly known as BYOD enclosures, come simply as an enclosure where you buy the hard disk separately and install it yourself. A variety of multi-disk units do come with a single hard disk but you upgrade them to the RAID resilience or extra capacity by installing a hard disk in an empty disk bay. This kind of installation typically can be done without the need for tools in all of the recent implementations.

Of course, the cheapest single-disk NAS units don’t allow you to upgrade or replace the hard disk yourself, so you have to replace the unit if that hard disk fails or you outgrow the hard disk capacity. On the other hand, the better units permit the user to upgrade or replace the hard disk, thus providing for a long device lifespan.

### **External connection ports**

A lot of NAS units have one or more USB ports so you can copy content off a thumbdrive or external hard disk, use an external hard disk as extra storage or a backup device for the NAS or use other peripherals. Some of them may use an eSATA port for the same purpose, especially to add storage or maintain a backup device.

It is also worth knowing that these ports may be used as a way of extending the functionality of the NAS devices through the use of various device classes; especially if subsequent firmware upgrades take place. Example applications include working as a print server for a USB-only printer to a camera server for a Webcam.

## **Functions**

### **Network-central backup location**

Most network-attached storage devices typically provide the ability to be a network-central backup device for all of the computers in that network. This is typically facilitated through manufacturer-supplied software or backup utilities that are part of a regular-computing operating system such as Windows Backup or Apple Time Machine.

### **Network-central file storage and drop-off point**

They also work as a data-drop-off point where users can “park” redundant data or data being moved between computers and hard drives. This is facilitated using standard SMB/CIFS, FTP or HTTP machine-to-machine data transfer protocols which these operating systems can support natively. The computer may run a manufacturer-supplied “assistance” shell to help with locating the device or linking it to the computer.

In the same extent, the NAS may work as a shared data library for software and data that is needed across the network. This would include utility software, device drivers, updates and patches as well as documents of common interest.

It is being extended to mobile computing devices like smartphones and tablets through the use of manufacturer-supplied or third-party network-file-transfer apps for the common mobile-computing platforms like iOS or Android. I have covered this topic [8] in an article about moving data between your NAS and your smartphone.

### **Media server**

This now covers the ability to share media files like digital images, music and video files to every computer and DLNA-compliant media device across the network. This is facilitated through an integrated DLNA media server [9] for standards-compliant devices and an iTunes-compatible server for iTunes media managers including Apple iOS devices.

But some manufacturers are targeting some of their consumer-focused NAS units at the distribution of media files across the network. These will typically have software that provides for low-latency transfer of audio and video content as well as an improved DLNA media server. Some of these DLNA media servers may support content-metadata aggregation where they index all media held on every DLNA server in the network and become the single point of reference for that media.

Some of the NAS units like RipNAS[10], ZoneRipper[11] or Naim UnitiServe[12] may even have an integrated optical drive to allow you to “rip” CDs to the hard disk or allow you to connect an optical drive to their USB port so you don’t have to power up a computer to “rip” new CDs to your media collection.

## Remote access and the personal cloud

A new capability that is being promoted by NAS vendors such as Western Digital[13] and Iomega[14] is remote access, commonly marketed as a “private cloud” or “personal cloud[15]”. This requires the NAS to have server software that exposes its location to a cloud service on the Internet and manage access to the data from Internet-based users. It works alongside client software available for regular or mobile operating systems to enable users to transfer the data outside their home network.

Variants of this software, such as what Iomega offer, may support peer-to-peer data transfer between multiple NAS units installed at different locations. This could cater for multi-site content replication or simple offsite data backup requirements.

## Platform NAS systems

An increasing number of high-end NAS units have the equivalent of an app store, where the manufacturer can provide free or paid file-handling programs that load on to these devices. These can include a simple photo-viewing intranet app, a DVR for video-surveillance apps, an email server or a download /Bittorrent manager amongst other things.

Some systems like the QNAP units deliver every function in one “hit” when the user purchases the NAS devices whereas others just maintain the “app-store” or “download-point” for users to add the functions on at a later time.

## What should you get

A single-disk NAS can serve a typical household well as a data drop-off point and media server. It can also augment a small-business’s server by fulfilling low-risk tasks such as DLNA media-server functionality thus keeping the server for business-critical needs. The high-end varieties of these single-disk NAS units like what QNAP sells would work well for those of us who want more functionality such as a Web-development workbench or a DVR for an IP-based video-surveillance system.

If you end up with more devices in your home and you want to be sure of continuity or expandability, a multi-drive system would fit your bill. You may go for a multi-disk system that has one hard disk installed so you can upgrade to resiliency or extra capacity at a later time.

Small businesses should consider a good multi-disk NAS that has what it takes to support increased resiliency. In some cases, a small business may operate the multi-disk NAS as a backup or file-archive device for their site’s main operational server; as well as a media server or similar application.

It is also essential to look at an offsite backup option for these units, such as the ability to connect a USB external hard drive for the duration of a backup job or the ability to backup to another NAS or cloud service via the Internet.

## Mandatory features

For basic functionality, the NAS should support the SMB/CIFS and NFS network file protocols and have an integrated DLNA and iTunes media server. The computer-NAS backup options can be hosted with manufacturer-supplied software but should work with Windows Backup or Apple Time Machine options.

I would also prefer that the NAS supports a continual software upgrade path for its functions. This is where the manufacturer keeps the firmware up to date as new standards come about, thus opening up the door to newer functionality and better performance.

The connection to the networks should be at least one Gigabit Ethernet port in order to support higher data throughput. You may not get this throughput with your existing router but if you upgrade to a newer router that has Gigabit Ethernet ports, you will end up with significantly higher throughput which would benefit applications like movies or high-quality music files.

## Conclusion

Once you have a network-attached storage device in place, you will never know what capabilities these devices will open up to the connected home and small business. It doesn’t matter whether it’s a backup location for your computers or a media server or just simply a “file parking lot” for your home network.

## Links

- [1] [http://homenetworking01.info/wp-content/uploads/2011/10/2011-10-22-011-e1321964433974.jpg#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://homenetworking01.info/wp-content/uploads/2011/10/2011-10-22-011-e1321964433974.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed)
- [2] [/2011/10/australian-audio-av-show-2010/#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://2011/10/australian-audio-av-show-2010/#utm_source=feed&utm_medium=feed&utm_campaign=feed)
- [3] [http://homenetworking01.info/wp-content/uploads/2011/12/2011-10-22-010-Seagate-NAS-as-music-server.jpg#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://homenetworking01.info/wp-content/uploads/2011/12/2011-10-22-010-Seagate-NAS-as-music-server.jpg#utm_source=feed&utm_medium=feed&utm_campaign=feed)
- [4] [http://www.seagate.com/www/en-au/products/network\\_storage/home-network-storage](http://www.seagate.com/www/en-au/products/network_storage/home-network-storage)
- [5] <http://www.seagate.com/www/en-au/products/external/external-hard-drive/goflex-satellite>
- [6] <http://www.qnap.com/Products.asp>
- [7] <http://www.readynas.com/>
- [8] [/2011/10/using-your-smartphone-or-tablet-with-your-network-attached-storage/#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://2011/10/using-your-smartphone-or-tablet-with-your-network-attached-storage/#utm_source=feed&utm_medium=feed&utm_campaign=feed)
- [9] [/2008/12/feature-article-dlna-network-media-series-setting-up-pc-less-networked-av/#utm\\_source=feed&utm\\_medium=feed&utm\\_campaign=feed](http://2008/12/feature-article-dlna-network-media-series-setting-up-pc-less-networked-av/#utm_source=feed&utm_medium=feed&utm_campaign=feed)
- [10] <http://www.ripnas.com/>
- [11] <http://www.zoneripper.com/>
- [12] <http://www.naimaudio.com/hifi-product-type/566>
- [13] <http://www.wdc.com/en/products/products.aspx?id=280>
- [14] [http://www.iomegacloud.com/landing\\_page.php](http://www.iomegacloud.com/landing_page.php)
- [15]

/2011/11/what-is-this-private-cloud-functionality-being-touted-wit  
h-nas-devices/#utm\_source=feed&utm\_medium=feed&utm\_cam  
paign=feed

---

## Buyers' Guides articles more accessible

06/12/2011 06:53

I have moved the Buyers' Guides articles from deep within the General Feature Articles[1]page to their own page [2]under Article Collections. This will make it easier for you to find the new Buyers' Guide articles that you need to consult before you buy that piece of computing or networking equipment.

As well, I have classed the article list between computer systems and peripherals; and network equipment including Internet-enabled entertainment. There is also a separate article group for buyers' guides dedicated to small-business and community-organisation owners. This layout will evolve as I add more buyers' guide articles to this site.

### Links

[1]

/article-collections/feature-articles/#utm\_source=feed&utm\_medium=feed&utm\_campaign=feed

[2]

/article-collections/buyers-guides/#utm\_source=feed&utm\_medium=feed&utm\_campaign=feed

---

## Fibre-to-the-home subscription rate in France increases by 71% over a year

06/12/2011 05:53

### Article - French language

Le nombre d'abonnés FTTH a augmenté de 71 % en un an - DegroupNews.com[1] (France)

### My comments

After I had reviewed this article about the apparent increase in fibre-to-the-home next-generation Internet subscribers, I had noticed a few key facts.

The areas where there was the FTTH activity taking place were France's major cities, but where there has been local initiative taking place concerning real-broadband or next-generation Internet, there has been the activity.

A good question to ask is whether there is immediate take-up of FTTH next-generation Internet as soon as customers know that the service is passing their door? For the apartment buildings and other multi-tenancy buildings, there may be issues concerning the rollout within the buildings as agreements are struck with landlords and building-management associations (body corporates).

I would also find that the competitive-service measures such as "multifibre" (each provider maintaining fibre infrastructure to the customer" and "monofibre" (infrastructure shared by multiple providers) allows more customers to choose value for money for their triple-play Internet needs.

### Links

[1]

<http://www.degroupnews.com/actualite/n7035-deploiement-fibre-optique-ftth-ftla-arcep.html>

---