

The case for open firmware

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If you're a gadget junkie like me your house is probably similarly littered with devices that did a job once, and could still do so much more, if only the vendors kept them up with the times. Join with me in lobbying for open source firmware.

Earlier this year I complained about my frustrations with Linksys hardware not supporting WPA encryption. I had a Linksys WAG325N ADSL gateway, a Linksys WET54G wireless to Ethernet bridge and a Linksys DMA2200 media centre extender.

The WET54G only offered the weaker WEP wireless security protocol and the DMA2200 only worked reliably if WEP security was used, rather than WPA.

Linksys contacted me after my story and told me they'd be making new firmware for the WAG325N (which, ironically, was the one device that did offer WPA) and would let me know when this was released. I never heard from them again.

Linksys aren't the only hardware provider who is lacking reasonably-expected standards. I also have a MediaGate MG-35NDAS portable media player. Stick in a hard drive, plug it in to a TV or projector, and you can watch all your, er, legitimately procured digital media.

It has a built-in WiFi adapter, but again, no WPA support. So, like with the Linksys devices, I must choose to either diminish the security of my home wireless network or go without.

Mediagate now list the MG-35NDAS as having reached end of life and consequently I would not expect any new firmware to ever eventuate.

So, vendors, why not turn over your firmware to the open source community for maintenance and development?

One of the remarkable benefits of technology over other appliances is the opportunity to give new functions through software. I'm not talking about adding features that physically can't work; for example it would be unreasonable to moan that the MG-35NDAS doesn't have HDMI output when I know it simply does not have the necessary components.

However, it's another thing entirely to be effectively prevented from using it because it just does not have the programming to cater for a specific WiFi security protocol.

The only thing preventing this is the lack of someone with the skill and time to introduce that enhancement. So, vendors,

if not you, then let us, the open source community.

There is a precedent. Heck, there's even a possible revenue model in it. Let me tell you more.

There is a good precedent already set for the wondrous benefits of open firmware. Tomato, DD-WRT and OpenWRT are but two successful examples of open source firmware for a variety of devices, beginning with the Linksys WRT54G.

These products all originated with the original Linksys firmware but evolved with sizeable rewriting. The features they bring include streamlined interfaces, DNS security fixes, VPN connections, IPv6, quality of service (QoS), WPA security, bandwidth graphing and many, many bug fixes and performance gains.

It is open firmware like these which have kept compatible devices operating years after their manufacturers abandoned them, and providing users with stability and upgrades they'd otherwise not have.

Perhaps therein lays the problem. What are manufacturers selling? Is it purely a device, or is it the combination of device and embedded software?

If I went out today and bought the largest Sony LCD TV available, and next year Sony releases a larger model, so be it. I have no basis for complaint or expectation of free upgrade, and it is a reasonable commercial decision for Sony to continually improve the specifications of their units.

Yet, if I buy a router or media player or some other gadget is it reasonable for the manufacturer to expect I buy next year's model if it only has software enhancements?

I expect Apple would have an uproar if original iPod Touch or first-generation iPhone users could never access the AppStore, or if buyers prior to the iPhone 3GS had no means ever to copy and paste or send MMS messages. Fortunately, the company provides a mechanism to upgrade older devices.

Obviously some features won't work because hardware support isn't there; the in-built compass in the iPhone 3GS won't miraculously appear on a 2nd-gen iPhone – but copy and paste will appear.

In fact, Apple charges iPod Touch owners for these software updates. This isn't popular with all, but at least Apple supports their older hardware. It's not abandoned. People don't have to purchase a brand new iPhone 3GS just to get MMS.

If the likes of Linksys or Mediatek – or most all other companies – won't support their older hardware then let the crowd do it.

iD Software has long been giving away the source code to its massively popular games such as Doom and Quake without negative effect on its newer titles. Instead, legions of fans have tinkered away to make modern high-definition rendered versions bringing enjoyment to newcomers and original players alike.

So, vendors, what about it? By all means, encourage consumers to buy new models by making compelling hardware, but don't force upgrades to receive software benefits. Make the old firmwares available. It'll improve your street-cred to be known as hacker-friendly.

Better that than make me drop your brand and buy elsewhere.