



GETTING YOUR HOUSE READY

TO GET MAXIMUM BENEFIT FROM THE NBN, THE NETWORK INSIDE YOUR HOUSE NEEDS TO BE UP TO SCRATCH. WILLIAM MAHER LOOKS AT WHAT YOU MIGHT NEED.

Here's where there's more conspiracy and confusion about the NBN - for one thing, you don't have to get the inside of your house cabled. Once your home is connected to the NBN and you've signed up with your ISP for an NBN service, your Wi-Fi router might be enough to get your computers connected.

But if you're dreaming of how to make the most of the NBN's speed, cables running inside your home are what we would pick. As you probably know, cables aren't limited by the same distance and physical roadblocks as wireless (though there are some) that slow down your speed. If you really want to push things by sharing HD video from your PC to your TV while someone else is downloading large files, or you've got high bandwidth laptop users in several bedrooms, then running things over a cable is the ideal scenario.

Wanting cable and being able to get cable are two different things, though. We're not about to go out on a limb and suggest everyone start planning when to get their floboards ripped up for Ethernet. Not only is it an extra expense, there's the problem of how to actually get the cables running to where you need them.

Several ISPs we spoke to for this story said that Wi-Fi and alternatives like

powerline networking (which uses the power points in your house instead of network cables) will be enough for many people. "It's a fairly decent investment to have someone come to your house and put wires through your house," said iPrimus product development manager Mark Duke. "Most people have a wireless modem, and they have it connected on one phone port, and that usually covers most of the house."

Take a trip to your local Dick Smith though, and you can see why it's tempting to go a step further. "When you're starting to move into IPTV land and all the connected TVs, your question is, is wireless going to cut it?" said iPrimus' Mark Duke. One cable installer we spoke to showed us photos of a new house where wiring extends to Ethernet points under the roof eaves for security cameras.

Perhaps one of the biggest surprises is that you're not supposed to install any data cabling yourself if it connects to the telecommunications network. This might come as a shock if you or a friend has setup Ethernet cabling at home - a licensed professional is actually supposed to do the job. It might seem ridiculous, but once you talk to a professional cabler you understand why (see page on right).

The pros are people like James Frost of Sydney Electrical & Data. As well

as showing us a folder of photos of networks botched by users who tried to do it themselves, he explained to us that the big danger isn't just losing your connection. "It's so you're aware of low voltage power, and that you stay away from it, or you wire it correctly. That's the main reason - so if Telstra turns up, or some other technician turns up, they know that Cat5 is not live to 240 volts," James said.

There are plenty of ways you can botch a network install, from kinked cables to interference from power and bad terminations. Another common mistake that amateurs make is mismatching parts, says Nicole Kersh, of online cable shop 4Cabling.

"People will order Cat6 cables, so they'll spend more money on the cable, and then buy the cheaper connectors. There's certain areas where I think people psychologically feel that if they order a better cable they'll get a better connection," she said.

Don't automatically assume that an electrician is also the best person to handle your phone and data. While there might be electricians with excellent data expertise, it's a different set of skills and they're not always the best people to handle your data cabling. If in doubt, ask for their registration card, and you can check with the registrar yourself. The ACMA web site also has a fact sheet.

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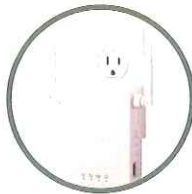
HOME NETWORK OPTIONS



Wireless router
From \$60. Do it yourself solution. Performance can be affected by distance to devices and thick walls in older dwellings.



Powerline networking
From around \$70. A great alternative to cable or wireless. Uses power sockets to transmit data at high speeds.



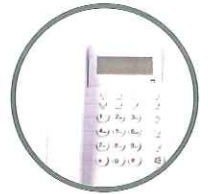
Wireless extender
From \$75. Combines with an existing wireless network to increase the range and power of the signal - perfect for larger homes.



Smart TV/Network media player/NAS
Works with your home network to deliver media files such as music and movies around the home.



Cabling
A clean install requires professional installation. More reliable performance than wireless or powerline, if installed correctly.



Phones - Will now connect to NBN box instead of external telephone line to house. Phone sockets in house can be re-routed to NBN box, if required.

COMMON HOME WIRING MISTAKES

The last thing you want to do is end up making one of these mistakes. Whether it's an extra network port for the bedroom, or wiring your entire house, these are just six reasons why you should get a professional to install network cabling, thanks to James Frost of Sydney Electrical & Data, Nicole Kersh of 4Cabling and Dani Kersh of Elecdata. Some of these cases could result in slow speed, dropouts or, in extreme cases, injury so avoid these at all costs!



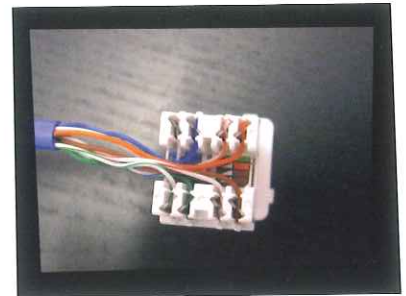
1 DANGEROUS CONNECTIONS

Says James about this photo: "Someone's come through the power socket with a Cat5 cable. So a) it crushes the cable. And b) it's right next to the power. So any professional that comes in would look at that and switch off all the power to the house and then rewire it. It's illegal, it's crushing the cable, it's interference, and you're likely to nick something in there and set it live on your data. Which is the main reason why you have to be licensed to do phone and data cabling."



2 BAD CABLE TERMINATION

Network cables are terminated at a data jack. Says Dani: "All of the pairs here are untwisted, and all of this cable is exposed from its sheath. It's a terrible termination. If you were to test this you'd probably get a fail. You should bring your sheath right up to the jack and you should keep it twisted right up until the point at which it's punched down. The more crosstalk you have, the worse the integrity of your data link."



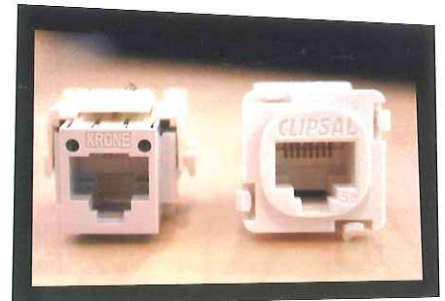
3 USING THE WRONG TOOLS

A special punchdown tool is used to press each piece of cable into a connector, and cut off the excess. Using the wrong tool or a screwdriver to do this can ruin the connection. Says James: "It will split apart the actual terminal block, and it means once the cable does fit in, the connectors might not meet correctly. Which will mean corrosion can get in and you might have losses on the line, or faults on the line due to the bad termination." [Shown: a Krone punchdown tool]



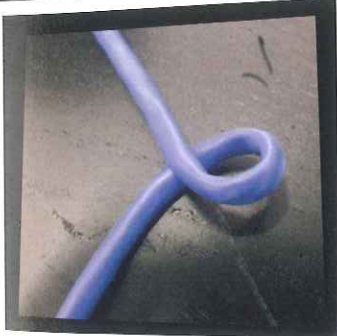
4 WRONG CABLE, WRONG SOCKET

Says James: "If you use standard RG12 connector – which is your normal telephone square connector – if you put one of those into a Cat5/Cat6 socket, you can actually bend pins out. Your phone will work fine, but when you go back to use it for data, you may find your pins have been broken inside." Similarly, don't use Cat6 cabling with Cat5 jacks.



5 PUTTING KINKS IN CABLES

Says James: "[Kinking cable] can break the copper, it can thin it out, or it can actually snap it. And then you get reflections on the line because of higher resistance. Basically it's not a nice, single cable all the way through any more."



6 USING THE WRONG CABLE

Round telephone cable runs between phone extensions (the socket on the wall). Flat telephone extension cable should only be used from the socket to your telephone or modem. When it comes to network cable, don't mix up patch cables (which go to your device) and network cable (the cable that goes in your walls). While they look similar, there are important differences.

