

Affordable Broadband for rural areas

Q: "A good number of us residents in urban Bangalow now enjoy high speed Internet connection and don't know how we managed before. What are the possibilities for high speed Internet access for our rural/fringe/hinterland neighbours?"

A: There are now a few options to get a broadband service.

For those within the recently increased 4-5 Km or so from a broadband equipped Telstra exchange (including Bangalow), the answer is probably ADSL.

Q "What is ADSL?"

A: It is the present most common form of high speed internet access. It uses the usual copper wires to connect the subscriber to the exchange. ADSL stands for Asymmetric Digital Subscriber Line; asymmetric because it provides download (incoming) data transmission at much higher speeds than outgoing data.

The important thing about having access to ADSL directly is that you then have a wide choice of Internet Service Providers (ISP's) who may be located anywhere in Australia. This means you can shop around til you find the one who can give you what you want at the best price.

Also it is a 24/7 connection. There is no dialling up every time you wish to access the net.

Q: "What can we do if our local Telstra exchange doesn't support ADSL?"

A: Telstra have introduced a 'Demand Register'. Once there are as few as 60-70 people within range of a particular exchange, who register their interest in having ADSL, Telstra will now usually commit to providing it.

Q "That's fine for those within 4-5Km radius of Bangalow or any ADSL equipped exchange. What about others?"

A: For those outside the Bangalow ADSL range the answer is probably wireless networking. This is a new phenomenon. It means that if you are located within line of sight of a transmitter used by any of the local wireless equipped ISP's, you can get ADSL. The transmitter towers at St Helena and Newrybar are a good examples.

The ISP gets the ADSL service directly from Telstra, but the final link to you from the ISP is via wireless rather than copper wire.

Q: "ADSL seems to be significantly more expensive than the old dial up. Is there any way to reduce that cost?"

A: One effective way to reduce the cost of broadband is for a group of households to form a small co-operative and share the cost of a single ADSL subscription. This requires the installation of some wireless network equipment to connect the users by line of sight. Such connections can be broadcast and/or daisy-chained and can therefore

cover quite a wide area. The more users, the less the cost. It's the same principle as an ISP but on a micro, co-operative level.

Q: "That sounds complicated. Does it mean that someone in the co-operative needs to be a technical genius to set up and look after the network?"

A: Not any more. There is now at least one local company in the business of setting up and maintaining such private networks. And the equipment is all programmable solid-state boxes these days, which makes it pretty reliable.

Q: "Is anyone starting a co-operative around here?"

A: Yes, our local community just outside Bangalow in Fowlers Lane is in the process of setting up such a co-operative. We have leased a single high speed ADSL service through an ISP who specializes in providing the key ingredients at affordable prices.

Q: "How many households will use this service?"

A: We plan eventually to support around 20 users in the catchment area of Sleepy Creek. This will keep the cost of down to very reasonable levels, including amortisation of the wireless network hardware.

Q: "You mention 'key ingredients'; what are these?"

A: "Well, there are really three main ones. Speed of the service, the amount of data that may be downloaded that is included in the monthly price and whether 'static IP addresses' are available to those users in the co-operative who want to host their own websites, community mail or other types of servers.

The required speed of the service depends mainly on the number of users and the type of applications they will use. For instance 'Voice over Internet Protocol' (VoIP) is becoming very popular with users as it can reduce the cost of phone bills by 50-60%, which often alone justifies the cost of broadband.

The amount of monthly data needed depends on what users do on the net. However we work on an average of around 2-3 GB/mth, which is probably very adequate for most broadband users these days.

Q: "How do you use 'Voice over Internet Protocol' You have the usual handset and dialling pad?"

A: VoIP can be either hardware or software based or a combination. The technology is new and different solutions are constantly being introduced.

We currently use a software solution, which is the least expensive and very adequate for SoHo outgoing calls to any global destination, using broadband.

This requires either a headset plus microphone (around \$50) connected to your PC, or you can buy a handset that connects via the PC USB port, or a device that connects an existing analogue phone to the Internet.

The software program (free) is connected to a service through the Internet. This allows you to enter domestic or international phone numbers via your PC screen. The service then makes the connection through into the public telephone service (PSTN) to your selected phone destination. Payment is made in advance via credit card - similar to pre-paid phone cards.

There are several such solutions. In most cases, STD calls to Australian, and international calls to US or UK numbers cost between A\$0.05-7 per minute.

Q: “What can you tell us about the new government Higher Bandwidth Incentive Scheme, HiBIS for short?”

A: That’s a very good idea that DCITA (Dept of Communications, Information Technology and the Arts) came up with recently. Basically, given certain sensible criteria, they will pay a subsidy to approved ISP’s so that the cost of accessing broadband for rural users will be no more than that of city users.

Essentially this helps ISP’s to fund the extra cost of providing broadband to those who do not have direct access to ADSL. This should encourage ISP’s to provide higher coverage of rural areas by wireless networks, at affordable prices, which Telstra is unlikely to do.”

Q: “Where do you recommend I get further information and advice to suit my needs?”

A: We should be ready to show people how our system works by the end of June. Anyone interested should contact:

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