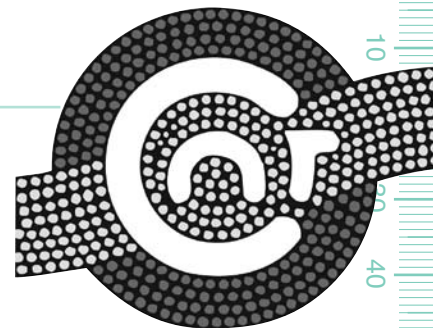


How to get a satellite Internet connection



BACKGROUND

Access to the Internet has become increasingly important for Australians, and is a particularly important communications tool for people living in remote, isolated communities. The Internet connected computer allows people to access services such as online banking, stay in touch with friends and family through email, and also to find out more about the world around them by surfing the web. Having said this, one of the challenges in connecting a computer to the Internet is finding out what services are available to make that connection.

All Internet connection services are provided by commercial organisations known as Internet Service Providers or ISPs. Typically an ISP will provide a range of services, starting with low speed dialup connections on a telephone line, and moving up to high speed services that can be accessed over a telephone line, a dedicated cable service, or a satellite link.

While dialup facilities are generally available, the speeds at which they operate are now regarded as too slow for anything other than basic email services, and most people look to higher speed services to provide them with an acceptable web surfing experience without long delays.

Since the only higher speed (usually referred to as 'broadband') option available in many remote locations is a satellite connection, this BUSH TECH explains what factors to consider when looking for and comparing satellite services, how these factors affect the cost, and how people can go about obtaining a service. Unlike phone services, access to Internet services is not guaranteed under the Universal Service Obligation (USO) scheme, but Government subsidies are available to remote area residents to make the cost to them comparable with urban costs.

FACTORS TO CONSIDER

There are several factors to consider when planning a satellite Internet connection and before signing up for a particular service plan or contract. Apart from the first factor, all of the factors outlined below will affect the overall price of the service.

1▶ Satellite communications are unique, because they involve sending and receiving radio signals over a very long distance. The satellite services are fixed satellite services, where the customer installation includes a dish that is permanently pointed at a fixed position in the sky. That 'position' is occupied by a satellite that moves around the earth at a constant rate so that it is always 'in view' at the same point. The distance between the satellite and the dish in these cases is so great that there is a delay in the time taken for the signals to travel from the ground to the satellite and back. For sending or receiving emails, documents and pictures in one direction this does not create any problems. However, for two way services like telephone calls, the effect is noticeable. Therefore if you are considering using two-way services like Skype (Internet telephone) over the satellite link, you should be aware that the delays will affect the quality of the service, particularly if the people you talk with also rely on a satellite connection. Telephone services do not require high down/upload speeds (see below), and a 512/128 service should cope comfortably, so the delay you experience is likely to be due to the distance the signal has to travel (up to the satellite and back) rather than a speed limitation.

2▶ Check that the ISP offers services that are subsidised under the Commonwealth Government's Australian Broadband Guarantee scheme. The Broadband Guarantee reduces the cost to the customer so that what you pay for a typical service is similar to what you would pay if you were living in a capital city. Otherwise, the ISP could be charging many times the city rate for installing the receiving equipment in a remote location, to cover their transport costs.

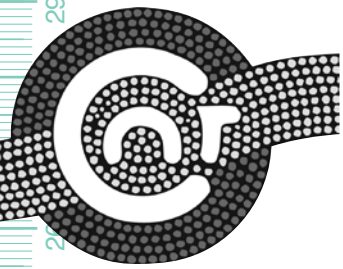
The charge, whether subsidised or not, will include an initial charge for connecting you to the service and a monthly fee.

3▶ Understand what speeds are offered. An ISP will typically quote figures like 512/128. A higher figure means a higher cost.

The first figure (512) is the speed that data is downloaded from the Internet to your computer, measured in thousands of bits per second. This figure needs to be high enough to cater for your typical web surfing and document download requirements. If more than one computer is 'networked' together at your location for connection to the

0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
210
220
230
240
250
260
270
280
290

290
280
270
260
250
240
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0



BUSH TECH #40

How to get a satellite Internet connection



but you need to think about how to restrict the usage when that point is reached.

5▶ Find out if there is a contract period. The key thing here is whether you will be locked in to paying for the service for a long period (like 12-18 months) and whether that suits your circumstances. Some ISPs offer services with no minimum contract period.

6▶ What backup and maintenance arrangements are offered. Some ISPs provide good maintenance backup in remote areas, while others do not. Compare the warranties they provide for equipment failures, and ask how much it would cost you to have repairs carried out after the warranty expires. Telephone technical support

Internet, and these computers are likely to be used at the same time for downloading, this will require extra download speed — otherwise you will have to tolerate some wait time when sharing the satellite link.

The second figure (128) is the upload speed. This is usually smaller and is important mainly if you send large files such as documents or pictures regularly to other places. Delays are less noticeable here because the receiver is not usually aware of exactly when you sent the document.

4▶ Work out how much data you expect to download. In most cases, the service plans quote a number of Megabytes (mb) — a CD holds about 650mb or Gigabytes (gb) — a DVD holds about 4.7gb of data which you can download within the basic service charge on a monthly basis: 1-5gb is typical. 1gb is ample if you only use email and download files and photographs, and will cover quite a lot of web surfing for one family. However, if you often download film clips or full length movies, or share the connection among a larger number of users, this will probably not be enough — full length movie uses about 600mb of download data, even in compressed form.

If you download more than your ISP service plan allows, your ISP will deal with this in one of the following ways.

One way is to charge for the excess bytes at a much higher rate — often several times the basic rate. Another is to squeeze the speed down to a much lower level (like 64 or 28) once you reach the monthly quota, and not charge for the extra data. Some ISPs can arrange to warn you by email when you are getting close to the monthly limit,

support is usually available, but while some ISPs offer after hours service, others only respond during business hours. If your service is critical for business or other reasons, this factor is an important one to consider.

It is important that you contact several ISPs to compare their offerings, taking into account the factors listed above.

HOW TO CONTACT THE ISPs

Further information including a list of satellite ISPs registered with the Australian Broadband Guarantee scheme can be found on the Internet by starting at this link: http://www.dbcde.gov.au/communications_for_consumers/internet/broadband_for_consumers/choosing_a_broadband_service). You will need to access an existing Internet service for this purpose. This website first helps you to check based on your location whether you are in an area that is serviced by ground based (terrestrial) services, since these services are generally cheaper than satellite. If the service locator tool on the website confirms that satellite is your only option, it will also list a number of satellite ISPs whom you can contact for further information.

Once you have selected an ISP and service plan, the ISP will advise you on the steps you will need to take and the information you will need to provide to arrange for service. Since the satellite dish will usually be installed on the roof of a building, the ISP will need to be given some practical information in advance, such as who owns the building, whether 240 volt mains power is available at the equipment location and when they can get access.