

## High-Speed at Low Cost

DSL (Digital Subscriber Line) is a great new form of high-speed access to the Internet, at a fraction of the cost of other high-speed media. There are several different formats available; the most common of which are ADSL and G.lite ADSL.

DSL, as a technology, allows digital information to be transmitted at high-speed across a pair of copper wires. DSL utilizes the unused bandwidth of the conventional phone system and is available to anyone with a phone line. However, there are some restrictions to this technology.

These restrictions arise from the location of the particular subscriber. The length of wire from the switching office is called the local loop. Due to some fancy physics laws, the longer this loop is, the less effectively it can carry a high frequency digital signal. Herein lies the problem; for DSL to be available to a potential subscriber, the subscriber must have a local loop that falls within a limited range and the proper equipment.

In conclusion, if DSL is available, you can have high-speed access at a fraction of the traditional price. Unfortunately, it is not available for everyone, and it may be some time until the infrastructure is completed. For further information, please contact Nautalex. ☒

## What's the Difference? Switches versus Hubs

In the non-technical world, a hub is the central part of a wheel where the spokes come together. In data communications, a hub is a place of convergence where data arrives from one or more directions and is forwarded out in one or more other directions. More than likely, you have a hub on your network: it is a device where network cables from your PCs and servers are plugged in, allowing them to exchange data.

The problem with hub-based networks is simple. Hubs are designed to share bandwidth, but sharing is not always a good thing. A hub has available a fixed amount of bandwidth, for example, 10 Mbps (megabits per second). As soon as there's more than one user, the bandwidth available is divided among those users. This means that you're not getting 10 Mbps, but a fraction of that. As a result, your network is slower because users are contending with each other for the bandwidth.

A switch is relatively simple technology that can make a huge difference in a network. Unlike the shared bandwidth of a hub, a switch provides dedicated bandwidth, because each port on the switch delivers the full bandwidth capability of the device. Users connected to a switched port have instant, collision-free access to the full bandwidth of the network. A switch integrates instantly into existing Category 5 wiring.

Nautalex has found that the purchase of a switch is often the best money a company can spend on its network, giving users on average a 10-fold increase in their network access speed. In practical terms, this means a file that takes 10 minutes to retrieve on an unswitched network, can be retrieved in one minute after the installation of the switch, a time saving of 90%. ☒

## Popular Acer Choices



The Veriton 5100 desktop PC utilizes the latest Intel® Pentium® III chipset, the 815E. Acer has taken the chipset's embedded features - memory arbitration, 10/100 Fast Ethernet, 3D positional 16-bit stereo audio, brilliant 2D and 3D graphics, and advanced hardware DVD playback - and built a system especially suited to today's new media-heavy software suites, networked offices, and business-related Internet sites.

The Veriton 5100's housing incorporates ease-of-use features designed to minimize fiddling at the back of the system unit. Frontal ports allow time-pressured

---

### INSIDE THIS ISSUE

- 1 High-Speed at Low Cost
- 1 What's the Difference?  
Switches versus Hubs
- 1 Popular Acer Choices
- 2 MS Small Business Server  
"Technology" Guarantee
- 2 Secure or Not Secure,  
The Frequent Internet Question
- 2 Computers for Charity
- 2 Quizmaster's Corner

professionals the freedom to connect plug-and-play peripherals and audio devices quickly and with a minimum of fuss. A full-featured keyboard, with quick access multimedia function keys, volume-control and programmable hot-keys improves workplace productivity even further. Users can utilize the keyboard's one-touch functionality to launch their favorite software, and manage media resources with familiar VCR-style controls.



When industrial-grade system performance and uptime is required, the Altos 1100E will fit the bill. With redundancy features similar to its bigger brother Altos 12000 such as hot-swappable/redundant power supplies, redundant chassis fans, and flexible hot-swap RAID configurations, the Altos 1100E is a viable alternative for today's IT budgets. With available dual Intel Pentium III 600MHz+ processors and main memory support of over 1GB, the Altos 1100E can easily support I/O intensive applications. The Altos 1100E includes a hot-swap 5-drive cage. ▢

## MS Small Business Server "Technology" Guarantee

If you purchased Microsoft Small Business Server 4.5 after January 1, 2000, you will qualify to receive software from Microsoft for a free upgrade to Windows Small Business Server 2000 (once it is released). For more information, please contact Nautalex. ▢

## Secure or Not Secure, The Frequent Internet Question

Before you make any type of transaction over the Internet, you should ensure that your financial or personal information is only going to the party you are intending to send it to. First, make sure your browser is using 128-bit encryption. This is the best encryption level available. Don't use anything less than 128-bit encryption or your transactions won't be as secure as possible. In Netscape and Internet Explorer (IE) this encryption level is active when the SSL (Secure Sockets Layer) v3 default settings are enabled. ▢

### Quizmaster's Corner

A \_\_\_\_\_ provides dedicated bandwidth?

A) hub B) router C) modem D) switch

The correct responses will be entered into a draw to win a prize, so give it a try. E-mail or fax your response to: [quizmaster@nautalex.com](mailto:quizmaster@nautalex.com). ▢

Now, here are a few tips to help you assess the security of the web site that you are sending your information to:

- The URL in the browser window displays "https" at the beginning, instead of http.
- In Netscape Communicator, the padlock in the lower left corner of the Navigator window will be closed instead of open.
- The site is secured using 128-bit encryption.
- In IE, a padlock icon appears in the bar at the bottom of the IE window, which indicates that the page is secure.

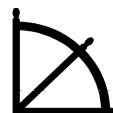
So, next time you want to send information over the Internet and you are unsure about the security of a web site, look for these things. If you are still not sure, contact the site's administrator for more details. You should also look on the site for mention of how your information will be used; to avoid having it sold to a third party. Overall, if you make yourself aware of the indicators of a site's security and exercise good judgement when making your transactions, the Internet can be an excellent method over which to send information and make purchases.

For further information about network security and how to ensure Internet security, please contact Nautalex. ▢

## Computers for Charity

Do you have some **working** 486/66+ or low-end Pentium machines which are just "too good to throw out"? We can put you in touch with a charitable organization that can make good use of these older PCs. If you are interested, please contact Shauna Leigh Richter at Nautalex (519-622-8840 ext. 6252). ▢

Published by:



# Nautalex

Business Services Inc.

*Network Solutions for Business*

200 Avenue Road, Cambridge, Ontario N1R 8H5

Phone: (519) 622-8840 Fax: (519) 624-5580

E-Mail: [news@nautalex.com](mailto:news@nautalex.com)

Web site: [www.nautalex.com](http://www.nautalex.com)

Nautalex designs and implements fully-integrated computer network systems for businesses. Providing consulting, software, hardware and peripherals, we offer complete, cost-effective network solutions. ▢

