Are we there yet?

Meeting the Need for Speed

By Jay Nelson, Editor

Technologically, the United States finds itself in a curious position. It's still the world's birthplace for innovations. Yet in some fields, like superfast intercity transportation, Europe and Japan's bullet trains leave us literally in the dust. It's the same with high-speed Internet access, where we rank at only No. 18.

As early enthusiasts of such new gizmos, America paid the price for working out the kinks. Those who wait until the gadget is perfected avoid not only those costs but the risks, mistakes, and dead ends, too. High-speed Net access is already essential for online videos, interactive sites, smartphones, and cloud computing, and will only be more so in the future.

Some amazing speeds are being achieved in labs here. A consortium of universities and government agencies have been working for over a decade on an ultrafast network called **Internet 2**, for instance. Like the original Net, however, this system is intended to link scientists with huge amounts of data to crunch, and not to speed YouTube videos to couch potatoes.

But there are other reasons we're so far behind. Small nations with densely urbanized, educated, and uniform populations are much easier to hook up than sprawling, diverse lands like ours. The world's fastest home speeds in South Korea average *four times faster* than ours, but even places like Slovakia and Latvia are substantially speedier. It's cheaper in Korea, too. US rates average around $45/month; there, less than $30.

Bands broad and wide

A little background may help to understand some basic issues. The term "**broadband**" is often used for high-speed Internet access, but it actually just means *a medium that uses more than one channel of data transmission at once*. "**Bandwidth**" is the *measure of speed* – how much data can be passed each second.

While good old dial-up completely took over the phone line with its slow song, **DSL** (*Digital Subscriber Line*) allows human conversations along with faster Net speeds by zapping data in digital bursts on higher, inaudible frequencies which are filtered out.

Most home users have **ADSL** (*Asymmetric DSL*), meaning that uploading and downloading speeds can be very different. But all forms of DSL, which comes in over a telephone wire along with voice, and **cable** Internet, which enters through the same leads as the TV signal, are broadband. Though the types are quite similar, each has its own slight advantages and disadvantages.

Cable may often be faster and not as limited by distance but nearby connections are pooled. As a single, dedicated line, DSL is thus theoretically more secure and less subject to speed variations during high-use periods. However, note that providers are separate — Qwest doesn't furnish any Internet access via cable, nor Comcast over the phone line.

Unlike "open" systems elsewhere on the planet, where different service providers can use the same physical connection for a fee, here generally *only* the company that provides the actual wire or cable grants Internet access. This means that unless one wishes to invest in something exotic like satellite access, most consumers are stuck with a choice between their phone company and cable provider. America is thus hobbled by the **lack of competition** with a limited variety of carriers, and especially by their **closed networks**.

Like other independent ISPs, SWCP has partnered with Qwest to provide broadband. We use their phone lines to connect to our network and services including

High Speed Ahead

email, webhosting, and technical support, while cable giant Comcast shares its tubes with no one. So we're happy to help you with any problems with your DSL, but may not be able to assist in cable-related issues.

US tardiness in wiring the nation can also be partially blamed on the government's long-term lack of planning and indifference in pushing for wider access and higher speeds. Despite all this, the FCC's new **National Broadband Plan** (*www.broadband.gov*) is to get 90% of the country up to 1Mb by 2020.

Other high-speed technologies have their own limits. A dedicated wireless service, such as our own **SWCP DIRECT**, requires a clear line of sight between radio transmitters. Distance, some weather conditions, other buildings, billboards, and especially trees in the path can degrade the signal. Access by satellite is a even more extreme version with the additional problems of aiming and signal delay. Such links are not cheap either.

These forms of radio hook-up should *not* be confused with **Wi-Fi**, which is merely a means of wireless access

to a nearby **AP** (*Access Point*) transceiver. The AP providing the hotspot still needs some form of high-speed connection with the Net to work. But along with Wi-Fi, DSL and cable are not yet available across much of our state.

Wiring America

Novel ways of getting data into the home have been have tried, such as through the power lines. It sounds like a great idea. But while the electrical grid is universal, such schemes have hit serious technical obstacles. In one experiment in Britain, for instance, everything seemed fine until it was discovered that light poles in the test area were broadcasting data as radio waves!

The FCC now plans to connect America's vast rural expanses, calling for at least one ultra-fast connection to a local library or other civic institution in every small town. It claims that that by making our country the "world's biggest high-speed market" things like health care delivery will be improved and jobs created. Even energy use, it enthusiastically promises, can be cut by regulating home appliances over the Net. Just how all this is to be done, though, is far from clear.

This isn't the only such Internet proposal ever floated with high hopes, inspiring ideals, and vague details. Even **Google** has tried to stimulate broadband. Several years ago, they proposed setting up free Wi-Fi zones in cities across the land. Technical issues with contractors, however, killed almost all of those. Now Google provides free Wi-Fi access only in its hometown of Mountain View, California. But they haven't given up.

Google still intends to wire a city as an open system demonstration project. Though not resorting to silly stunts, Albuquerque put its own bid in, which Southwest Cyberport supports, at *googlequerque. com*. The competition is now closed to new entries. We'll keep you posted. Keep your fingers crossed!

Check Your Spam Filter

Hopefully, you're already using SWCP's fine set of spam filters to keep junk out of your Inbox. If not, go to our webpage, *www.swcp.com*, and click on "*Spam Filter*" in the left sidebar to start.

It's possible to set the filters too high and screen out messages you actually want. So you may occasionally want to check what's being thrown out — or if you know you're missing something you should have gotten.

The easiest and safest way is to use one of our web-based email readers. On our homepage, check "*Web Mail*", and choose your favorite client (we recommend Roundcube). In your mail, you will find a folder listed as "*Spam*" in Roundcube, "*Spamfilter*" in Twig. This is where all the screened junk is dumped and where it stays until automatically deleted. You should be able to check messages without fear of viruses, but do *not* open unknown attachments. If you find a message you want to save, move it to your "*Inbox*" or other folder.

Then go to your spam filters to tweak their settings.

Finding Big Discounts at Amazon

Want to find their normally hidden best deals? Here's a clever but totally legal trick, courtesy of *Wired*.

1. *On their homepage, click on the Amazon department you want to check, such as "Books".*
2. *Look in the lenghty URL for the number that follows "node=". For books, that would be "283155".*
3. *Paste the URL below into your browsers' Location bar, replacing the word "number" with the 5-digit code, and without any spaces or breaks at all:*
   *http://www.amazon.com/gp/search/ ?node=**number**&pct-off=75-99*
4. *The webpage that appears will list all the products in that category from **75-99% off***.

This can be done for all Amazon departments.

Tax Time is Backup Time

Now that you have your financial information all updated, don't forget to back it up. One effortless way to keep all those important files and data secure is to use **SWCP BUS** online backup service. Updates what you want, when you want, over your own broadband connection. Just $7/month if you have broadband through us.

Call or visit our website for more information.

Buy Your Modem and Save

If you ordered Qwest broadband directly from them, you're probably renting your modem. You can save cash over the term of your contract by purchasing your modem through us, $100 for wireless-capable, $75 otherwise. You'll still have to call Qwest yourself, get an RMA number, and ship your old modem back, but for long-term customers the savings could be substantial.

Net Notes

The art of @

The "at sign", @, has been "acquired" by the Museum of Modern Art as part of its design collection.

Probably originating as a contraction for the word "**ad**", Latin for "to, towards, at" and so forth, during the Dark Ages it was used to denote various measures. Appearing on the first typewriters as the "commercial 'at'", it became an electronic symbol in ASCII code in 1963. Largely neglected, the symbol was mainly used to mean "at the rate of" in invoices when Ray Tomilinson found it in 1971. Struck by its strong locative associations and general under-use, he soon appropriated it for the very first email to distinguish the address of the recipient, and the rest is history.

Known as the "monkey's tail" in Polish and German, the Chinese see it as a little mouse, Italians and French as a snail, while the Russians think of it as a small dog, and Finns as a sleeping cat. But in all languages, @ has become *the* universal symbol of the Internet age.

One only wonders what the museum's curators will try to tag as their next "acquisition".

—MoMA