

*Telcom companies have become adroit at using smoke and mirrors to promote their products, and it's really scary how many of their own executives have come to believe their own BS. It's even worse when the BS is believed by politicians who control the industry legislation. At the time I wrote this spoof, we canvassed over 60 legislators to see if they knew the difference between a bit and a byte and how that related to Internet speeds. Only one (ably assisted by her off-camera tech wizard, also female) understood. This is like creating legislation in a language like English without knowing your A, B, Cs.*

*In technology, we (geeks) seem to take many things for granted without understanding that for many normal people the basics are incomprehensible. No progress can be made with America's third world broadband infrastructure until we as an industry can explain the basics of our industry. We spend far too much time farting around with pipe and speed mis-descriptions without understanding the huge impact to the quality of peoples' lives that high speed applications can bring. We can only blame ourselves for this sad state of*

## Perspectives

### Mega BS (in telcoland)

Boasting around the water holes, as our ancestors have done since time immemorial, is a time-honored profession. It's always been fueled by testosterone and alcohol, which was bad enough, but today we have a new ingredient to add to the fuel mix: "technology." Whereas in the past exaggeration varied in direct correlation with the alcohol intake of the exageree, now when someone asks you what is the size of your connection, even if all parties are stone cold sober, the response is only tenuously related to reality. To answer that question, one has to do a double take, check which country one is in and, if in the US, invest a lot of creative energy to develop a WAG<sup>1</sup>.

(BTW, I also think it's great that in our politically correct world, connection [to the Internet] size competitions can now be played by both genders. I will not attempt to delve into the social and psychological implications of a sleek female business type boasting to a male truck-sized college linebacker that hers is 10 times bigger than his — that I'll leave to the soaps.)

"Connection size, you ask? Well, mine's **humongous!** So there!" In the past, all sorts of miracle cures were offered to guarantee to increase the size and potency of your connection, but now, thank goodness, this is no longer necessary as the phone and cable companies have cornered the exaggeration business. "Well," you respond, "I have a 1.5 MEG connection, a tee-wun<sup>2</sup>, and its **burstable!** So there!" In Texas, these sessions can really get to be fun, despite the fact that all parties forget to add that the whopper of a tale about connection speed was supplied by a baby bell — but I suppose that would detract from the main point.

I witnessed one of these sessions recently, at which there was a suave representative of Qwest (my local telco) boasting not about his connection size, but about all the people whom he had helped to make theirs bigger, for the "small" consideration of around a thousand bucks a month. As that's a bit out of my league no matter how many gorgeous ladies take up my offer of dinner every month, I decided to do what any good American, not only from Missouri would do, I played the "show me" card.

After examining his, I shouted to the whole bar for attention. "Gather round, gather round, look at this **little** thing I have found!" (Thanks, W. C. Fields) "That's a weenie connection! You are measuring it in **bits** not **bytes**, and that's a little bit meg and not a big **byte** MEG, so your connection is really a tiny 125 Kilobyte. That's a small double dial up! My Granny has a bigger one than that!"

<sup>1</sup> WAG: technical acronym, stands for "wild ass guess."

<sup>2</sup> T-1 is the common appellation for highly-regulated voice or data line services traditionally intended for businesses, which may also be called DS-1, T1.5, a T1 or DS1 lines.

We kill \$10 elephants.



For our glorious readers who hate techiegabble, let me explain: bits and bytes are units of measurement of information storage. You've heard that deep in the core of a computer, everything is stored as a 1 or a 0. A bit is that primal binary digit, 0 or 1. That's far too small a unit of measurement to use comfortably, even in the bad old days when computers were physically huge and small in capacity, so bits were lumped into various multiples and combinations, and eventually by convention bytes became the most commonly used combination, and 8 bits to a byte the most commonly used definition, and now everything in the storage realm is measured in bytes. By convention, a bit is represented as "b" and a byte as "B".

As the capacity of computers increased, techies needed a shorthand for large numbers of both bits and bytes, so they adopted the multiplier prefixes used by the International System of Units, commonly referred to as the metric system. Comprehensibility of this convention is slightly compromised because in the world of computers the multipliers are applied using binary rather than decimal math, but the scale is easy to approximate — a kilo is *about* a thousand, a mega is *about* a million (a thousand thousands), etc.

#### Prefix Meanings for Units of Computer Storage Measurement

Name	Symbol	Value
kilo	k/K	$2^{10} = 1,024$
mega	M	$2^{20} = 1,048,576$
giga	G	$2^{30} = 1,073,741,824$
tera	T	$2^{40} = 1,099,511,627,776$

Today, at the start of the 21<sup>st</sup> century, the most useful unit is the megabyte (1,048,576 bytes, or 8,388,608 bits). This applies to everything in your computer, and it commonly looks like "MGBS" (the BS is free and the MGs were not bad either) or "MGBT" or even "MB", add "s" for plural.

Now, the weenie megabit (1,048,576 bits, or  $\frac{1}{8}$  of a byte) should be shown as Mgbts (all lower case after the M). But — and here comes the sleight of hand — our crafty phone and cable companies, when they realized that the technical boat had left the dock and they were high and dry, played a shrewd card. They did this:



Yup, everything in your computer is measured in BYTES and everything that travels between computers — on the network and over phone or cable company lines is measured in bits. To make it sound more familiar, they are using Megabits (Mgbts), but the marketing material represents it as MGBTS (which correctly means Megabytes). This makes telcos the only industry in the world that measures data **storage** capacity differently from data **transmission** capacity. Unfortunately, a Megabit is an eighth of a Megabyte, so the tortoise is still dead slow despite the Ferrari logo. So, by simple math, we discover that this "high speed" animal you've been sold as a "broadband connection" isn't anything of the sort — unless you are comparing among tortoises, in which case you might make a case that it's esoteric.

Now, everyone who has ever spent time in a bar knows that this sort of information becomes dynamite especially when a large portion of the crowd has signed up with our crafty Qwest snake oil vendor at the megabuck rate for tortoise service. Boy, did that tortoise try to run with all his irate ex fans close behind him. So, gentle reader, before you or any of your family get caught in this trap, check very carefully to see how big your connection REALLY is before you tell anyone. The only true "mega" in this whole circus is the mega-billions of dollars that this kind of misrepresentations sucks from the US economy through its unsuspecting users.

And last, but not least, take a word from history: "It's the quality that counts, not the [band]width."