Better Never Than Late?

This summer was full of travel for me. In fact, I put more than 10,000 miles on my car. Since May, I have gone through three different GPS units. To begin with, I have one built into my car. It is convenient to use (push a button and it responds to voice commands, and it even mostly understands my Texas drawl). However, it does not display some data that my older top-of-dash GPS displayed. Mainly, it does not display the current speed limit, nor will it flash red when I am speeding—a necessary feature for me. It is also not at eye level. Finally, when I am using the XM radio, the GPS screen is not shown (although it still gives me voice commands if I want). I still like my top-of-dash portable GPS. My older portable

GPS quit working, so I bought a new unit which is also voice activated (thank goodness, using different "trigger words" to activate than the built-in GPS). When not using the XM radio, I use the built-in unit to show an "overview" map on a large scale, with distance and time to destination. I use the dash-top unit to show small-scale streets and turns, along with speed limit and my current speed. I know it sounds confusing, but it works for me. I can use it without thinking—the mark of a good system. (And yes, I know I am a geek. Please, no emails!)

You would now expect me to expound about how the two GPS units disagree as to route, causing confusion. In fact, about 99.9% of the time, they totally agree on the route—and when they disagree, it is usually over trivial details. What irritates me, however, is the lack of consistent accuracy of the maps. Several times, both units will cheerfully tell me that the restaurant or hotel I am looking for is, "100 yards on the right" when it is actually on the left. 100 yards (at 45 mph) is not enough time to try and change several lanes in traffic.

Obviously, both GPS units (different manufacturers) have the same map data. Both are usually wrong at the same time. Having the wrong data sort of leads me to what I consider the first law of information assurance:

1st Law—The information should be accurate.

Getting the information too late to do anything about it leads to the second law, merging information assurance and delivery time:

2nd Law—The information needs to also reach me in time to be useful.

Getting the destination information 50 yards before I need it—possibly not useful. Getting it 400 yards early? That is probably plenty of time, unless the data is wrong. When the data is wrong, I need the information early enough so that I can realize that it is incorrect, so that I can make corrective action.

If the information might be incorrect, I need to be notified early, so I can potentially take alternative action.

The problem is that I tend to totally rely on my GPS when driving, and I no longer really think that much about my destination—I let the GPS do the work. Sort of like I no longer need to remember phone numbers (that is what my smartphone is for).

However, if I know that the GPS is going to be wrong (construction zones and detours), well, I have a few minutes to "get my bearings", and put my brain back into gear. I can usually manage to get back on route. It would be nice if occasionally the GPS would say, "I am not really sure about the next 2.7 miles. Try looking at the detour signs yourself."

I was mentioning this problem with lack of useful information in a timely fashion with my wife, Deb. Specifically, while we were driving 1.4 miles down a "possibly unpaved road" (the GPS got the unpaved part right!) attempting to get back on Interstate 40 in West Memphis, Tennessee. I got a bit lost when the GPS gave me incorrect directions in a detour around a construction zone. My wife, a former Digital Equipment employee back in the good old days, reminded me of the term GIGO—Garbage In, Garbage Out. I had not thought of that term in a while but it still explains a lot. Bad information input = problems with the output. What does "bad information" mean? It could mean simply out-of-date information, or it could also mean malicious (and potentially destructive) data. Either way, the system fails.

It is hard getting valid information out in time. Frankly, I do not know how they encode all of the map data and access it in "close to real time." I am pretty impressed. All I have to do is say, "Hey GPS," then tell it to find the closest coffee shop, and there it is, complete with routing. Need the next rest area? Next gas station? Next ATM? Next restaurant? All just a few words away. Life is pretty good, the GPS is mostly accurate, and I maintain a full coffee cup most of the trip.

All of which means that I drove 11,327 miles this summer, at an average speed of 51 mph, and achieved 53.3 mpg (yeah—I am one of those hybrid owners—but I am NOT one of slow ones who drive 55 in the right lane—I zip along at 70). And I did this with mostly correct GPS directions delivered in mostly plenty of time to be useful.

What if the information was wrong or slow? Well, it is just a car trip. After all, there are route signs. A wrong turn, at worse, usually means less than a 5-minute detour. In the grand scheme of life, this is a pretty minor thing. I can always turn around and try again!

Of course, if the data were wrong or late, and the application involved a supersonic jet, a satellite navigation program, some type of munitions guidance system, an air traffic control program, or a missile defense program, I suspect the consequences would be much worse than a 5-minute detour driving 1.4 miles down a, "potentially unpaved road."

That is why I sometimes do not sleep well at night.

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