



Digital Shards

Charles Petrie • University of St. Gallen

Hint to readers: this column is about embedded messages.

“**T**he Transportation Security Administration (TSA), the federal agency in charge of security for the nation’s transportation systems, had an internet policy that barred employees from accessing web sites containing ‘controversial opinions.’ In July 2010, TSA dropped that ban, most probably because such a broad ban would violate TSA employees’ First Amendment rights.”¹

“Employees using company-owned computers to view pornography, harass coworkers, or gamble (in states where it’s illegal) open up the employer to potential lawsuits and even criminal charges.”¹

“Customer may not establish a web page using a server located at Customer’s home.”²

I know this is a huge waste of expression bandwidth, but if we let them restrict us too much, then they’ve won. And yes, I know long messages are dangerous, here in 2020. But I just have to write.

I remember the good old days of the open Internet, when the first amendment let us say whatever we wanted. Remember the Well? What a golden age that was in retrospect. How did it come to the point where we have to communicate like this?

I wrote a little article in a technical magazine a long time ago – January 1998, in *IEEE Internet Computing*. It wasn’t a technical article. It was back when we could just opine. It worried about too much commercial interest in our little nerdy world. How naïve this looks now.

Fast forward to the first decade of the 21st century, and the seeds had already been sown.

Governments were discovering that they couldn’t really block access to sites. But your Internet usage at work was restricted, and your employers owned your email on their servers. Fine. Universities wouldn’t let you use their servers for political purposes. Fine. Then the government reserved the right to look at all electronic forms of communication for antiterrorist purposes. Ah, fine.

What we didn’t do was put these trends together with the growing influence of corporate entities on government. We didn’t realize that universities would themselves all become private, typically aligned with the set of companies that provided the technologies for their all-virtual courses. Everyone was eventually using one corporation or another for all of their services. So why block access when you control the servers?

No one noticed much when private servers were outlawed, ostensibly for security purposes. Linux became an irrelevant, outmoded technology except for some commercial, high-grade, proprietary versions. Only a few nerds like us would care.

Then the corporations were free to impose “shrinkwrap” restrictions on the use of their servers – that is, all servers. No objectionable content. All content vetted by editors. All content to follow guidelines. No critiques of “home” providers. No critiques of other providers that could cause a lawsuit. All political discussion immediately directed to the government for investigation. How fast it happened. And how little anyone seemed to care at first. Each ideological faction was glad that the crazy postings of the opposition had ceased. Surely the world would be more reasonable now.

Of course, then the corporations turned on one another, and there aren't so many now. Starting new ones is really hard, requiring sponsorship from one already in the big leagues. Things got tighter.

Oh, sure, we all still have free expression, if we want to get a permit to speak in the park. But there's nowhere left to post anything but lovely travel pictures and nice product reviews. Yes, I remember the media. All electronic, and all corporate now. You want to blog? Who's your provider? Want to set up a discussion group just among friends? Who's your provider? And the long tail is still with us – as long as it's harmless, and someone can profit from it. Cat forums are still great for business. But DIY advice is not.

There is no "right to the Internet," no more than there was ever a right to publish in someone else's newspaper, to use a metaphor you'll get.

And yes, I remember technical journals when there was at least a pretense that they were independent of corporate influence. Who can afford now to volunteer the immense amount of review and publishing work those used to require? And who's your provider? At least now we know who brings us these latest "research results." Just ask your doctor. You know who owns him now, too.

We can't talk about any of it anymore – the loopholes were closed swiftly once the process got going. Except for this one.

There are still us "old guys" (yes, we're still working because we have to) who started out in assembler with absurdly small memories. So we had to write self-modifying code – a very bad practice, but what evil fun! Now turned for the good.

So, we've gained access to some backports, where the machine-to-machine messages are exchanged. We're using them as routers for our embedded messages that are dumped in logs where we can decode them. All of the machine messages are meaningful to the machines and carry a second meaning, like this one. Boy, are we good.

We're not even really subversive. We're just old nerds who resist because that's our nature. There's nothing left to do, really. Well, there is. I'm working on encoding entire books for distribution (because, of course, all extant books are controlled by electronic vendors, libraries having become little more than access points for those who purchased the right credentials). Guess what I'm working on first? Fight C...<noise>

If you can read this, r<noise>

Hello, I'm sorry. Darned ancient keyboard. Ended too soon. Do you want to meet? And discuss next steps? Name the day. Go to the historical garage. Expect a tall, white-haired man. Rest assured, we're safe. ☐


Acknowledgments

Apologies to *Plumage from Pegasus* by Paul Di Filippo.

References

1. "Employers Can Restrict Employee Web Surfing," *Lawyers.com*, <http://labor-employment-law.lawyers.com/human-resources-law/Employers-Can-Restrict-Employee-Web-Surfing.html>.
2. "Acceptable Use Policy – Residential Customers," Charter Communications, Nov. 2010; www.charter.com/footer/footerPage.jsp?tag=policies_resi_hsi_accept_use_policy.

Charles Petrie teaches and coaches the topic of innovation in design thinking at the University of St. Gallen, Switzerland (<http://dthsg.com/dt-at-hsg/>). He retired as a senior research scientist from the Stanford University Computer Science Department. His research topics are concurrent engineering, enterprise management, and collective work. Petrie has a PhD in computer science from the University of Texas at Austin. He was a founding member of technical staff at the MCC AI Lab, the founding editor in chief of *IEEE Internet Computing*, and the founding chair of the Semantic Web Services Challenge. Contact him at petrie@stanford.edu.

 Selected CS articles and columns are also available for free at <http://ComputingNow.computer.org>.