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From the Standards Blog:

ALPHA PREDATORS AND CYBER *IN*SECURITY

[] [] [] October 15, 2003 - If you've been reading the IT press lately, its likely that the name "Dan Geer" will ring a bell. If not, type the search "geer + microsoft" into Google and you'll be able to access 70,000 hits. Sorry; that was 15 minutes ago. Now its 75,300 hits. Seems like something's going on here.

That something is a report entitled "Cyber In security: the Cost of Monopoly," co-authored by Dan Geer and six other security gurus. The thrust of the report is that a world that relies on a single, tightly integrated OS and applications environment controlled by a single vendor is more vulnerable to attack -- and disastrously so -- than a world that relies on a more diverse IT environment.

The Computer & Communications Industry Association, a long-time critic of all things Microsoft, published the report. Geer, the CTO of @stake, inc., a security firm, learned the day after the report was issued that he had been retroactively fired as of the day prior to the report's release. By coincidence, Microsoft is a major customer of @stake.

What, you may ask, does this have to do with alpha predators, let alone standards? Several things:

- The more the IT world evolves, the more it emulates an eerie subjectivity to the laws of physical nature, notwithstanding its virtuality. The adoption of biology-based terms such as "virus," "neural networks" and, in the case of the Geer report, "computer monoculture" seems to be not only convenient, but also even unavoidable.

- Hence, the best predictions of future risks -- and the most instructive source of models for future solutions -- are often found in nature. Mother nature, it appears, even looks after her virtual own.

If one accepts this premise, then many of the conclusions of the Geer report become manifest: just as a single, newly-mutated virus can wipe out an entire species limited by a depleted gene pool, the world's Microsoft-based systems can be taken down by a teen-aged hacker in need of a date.

But - natural science reveals another risk as well: the destabilizing influence of the removal of a "keystone predator." In this model, it is recognized that the role of the top predator in an ecosystem has a moderating influence on most, or all, of the downstream species. Remove the alpha predator, and all hell breaks loose.

Remove the alpha predator, and equilibrium of a sort will eventually be restored, but that equilibrium is likely to be at the cost of multiple extinctions, long periods of population booms and busts, and overall ecological degradation. In David Quammen's latest book, "Monster of God," the author goes even further, postulating that our lives are in some way enriched (or at least informed) by the humbling reality that our essential value in the ecosystem can be reduced to mere calories.

So what does Mother Nature teach us? That we're better off protecting the alpha predator, the ultimate devil we know? Is Geer wrong? Should we come not to bury Microsoft, but to praise and protect it?

I think not. The trick is to discern what else we can learn from nature, and seek a different course, one that leads where we want to go, and with the winds of nature at our backs.

And that takes us back to standards. The IT world need only be constrained to follow the rules of the physical world to the extent that it is bound by its physics. Change a variable in the program, and the fractal patterns must change. Happily, some of the variables in the IT world are within our control.

One of those variables involves our ability to agree on interconnections, interfaces, enablements -- in short, standards. Standards, by their nature, create evolutionary opportunities that are beneficial. And, because these opportunities are made available as well as beneficial, vendors have no choice but to take advantage of these evolution pathways. Linux is a sterling example of a successful effort to adjust the dial of commercial gravity. Once the opportunity to make money by offering Linux-based products came into credible existence, the rules of virtual commercial physics left vendors no alternative but to build such products.

The lesson, then, is not to fight gravity exclusively with antitrust legislation and other man-made rules that seek to outlaw the laws of virtual commercial physics. That type of fight is far too exhausting, and always, ultimately unsuccessful. (Remember communism?)

The lesson of nature, instead, is to set standards that make the path to diversification appear to be manifestly easier, strategically safer, and ultimately more commercially desirable -- even for the alpha predators.

Then just stand back.

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CCIA Press Release: http://www.ccianet.org/press/03/0924.pdf

Geer Report: http://www.ccianet.org/papers/cyberinsecurity.pdf

ComputerWorld Geer interview (October 6, 2003):
http://www.computerworld.com/printthis/2003/0,4814,85563,00.html

Geer + Microsoft hit counter: http://www.google.com/search?sourceid=navclient&ie=UTF-8&oe=UTF-8&q=geer+%2B+microsoft

NYT Review of Monster of God ("The Better to Eat You With, My Dear"; August 31, 2003:
http://query.nytimes.com/gst/fullpage.html?res=9406E5DD1739F932A0575BC0A9659C8B63