In April I went to a meeting of the Congress for the Future of Engineering Software (COFES), an all-nerd affair so leading-edge that some of it is bound to go over the cliff. How about engineering snippets of DNA as scaffolding to precisely assemble carbon nanotubes on a big scale? The stuff would have properties previously available only on the planet Krypton.

Some presentations covered "semantic technology" for Web 3.0. That’s hacker-speak for intelligent software, searching millions of sites, coughing up things you can’t get now. For instance, it might directly, immediately report from distant sensors the wind speeds in an approaching hurricane, comparing them with a prior hurricane at the same stage.

But the human side of this may be more significant. To use Web 3.0 humans will need a more compact, visual language. The trend toward this began B.C. (before computers) with acronym proliferation. It continues in the cryptic symbols used in text messages and navigating computers. Graphic symbols convey more in less time on a small screen. Kids navigating computers learn icon language naturally, but the concept is far from new. Chinese graphic symbols 5000 years ago were more compact than English, but Web 3.0 will speed up a global social change.

This revolution could be more powerful than its technical designers — or almost any denizens of the 20th century — can foresee. A visibility system in a workplace is a graphic language real-time, of the real thing. However, each language has its own syntax, or meaningful relationships between its symbols. To use a language one must learn these, and a human change accompanies this. I recall a Hewlett-Packard plant manager 20 years ago, amazed that a recently-developed visibility system let him “read his plant” with a brief walk-around. He abandoned his written daily status reports. It began to dawn on him that if he could “read processes” directly, so could every worker. They could pick off most of what they needed to know immediately, plus a lot more if they wanted.

Suppose that with the magic of Web 3.0, you could do that almost anywhere in the world. If technical visibility became virtually limitless, but human perception time and ability remained limited, exactly what would anyone want to know and why. What would we do differently? What would we seek to do with somebody — or to somebody?

The software developers’ visions of the next “killer app” are also mixed. Some see business processes much like today, only moving more data faster. Others envision fundamental change, like a real-time product design team at interactive consoles, tapping "Web 3.0" to integrate a complex product checked for feasibility from every angle before the first physical prototype. That assumes a business system with far more trust than at present. Just as with first-stage lean conversion, the human challenge will be the hardest.

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