

Holy tower of Babel: The language and linguistics of machines

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Satellite Communications for Learning (SCOLA)

Today just happens to be a very good time to celebrate the symbiosis of language and linguistics with technology. We are at a dizzy height of computer and hyper-electronic wizardry that oscillates, parses, and conjugates our primary communicating tools—our voices, thoughts (inner speech), ideas, visions, and feelings—our languages and all our media.

Some of our general tech toys have been friendly and cozy, spreading security, information, or entertainment: the telephone, radio, television, satellite communications. Others, even some of these, have seemed overwhelming or even threatening for the insurgence they sometimes make into our more pastoral boondocks attitudes and mentalities. Maybe we fear even that the motors of machine translation, the computers of computational linguistics, will replace flesh and blood linguists?

Trying to understand the love-hate relationship that some of us have with technology, some time ago Jim Handey on *Saturday Night Live* said: “I bet what happened was, they discovered fire and invented the wheel on the same day. Then, that night, they burned the wheel.” So here we are today to baptize the wheels of technology and to light more fires for communications and (let us add) pedagogy.

Technologies of SCOLA. Let’s begin with Satellite Communications for Learning (SCOLA) and its technology, all of which here is about knowing and pedagogy. Remember, however, that the real technology, which appears as machines, motors, and movers, is not really hardware; it is the surge of dynamism of a people in freedom, acceptance of challenges, and stored trigger-power ready to explode into new dimensions.

“Because the essence of technology is nothing technological, essential reflection upon technology and decisive confrontation with it must happen in a realm that is, on the one hand, akin to the essence of technology, and, on the other, fundamentally different from it. Such a realm is Art” (Martin Heidegger as quoted in Ulmer 1985: 15). Joseph Beuys gave this advice to art students he visited in the United States: “The making of sculptures, the forming of things must be based on thinking and in this state it must have already reached a certain intensity, to be then ‘informed’ or transferred onto another material. You should not at all pay

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attention to tools, equipment or materials, but to the point at which the forms arise” (Staek and Steidl, 1997: 215). “After visiting the over-equipped studios in an art school in Minneapolis in 1974, Beuys remarked on the relatively unimaginative quality of the students’ work. ‘No results and with the most outstanding means,’ he cried. ‘I would begin by giving them a potato peeler and a piece of wood’” (Staek and Steidl, 1997: 14).

In SCOLA-as-ART I think we are enjoying great growth into a cybernetic brewery of the new marketplace variety; growth, I might add, of the sort that comes from deep insight and realization of what we really want to do and can do best and will do. The SCOLA operation is, then, much like a family or a commune, producing, directing, and playing all the parts in a homemade film.

Largely through the Internet and its ideal suitability for SCOLA’s global immersion in the voices of conversation, our playground has become a potato peeler and a piece of wood for the sculpting of a friendly global familial chitchat. SCOLA has attracted people from the farms and small towns around who find the murmurs in the wavelengths coming in from all over the world an exciting and happy place to mix it up. Somehow this lingo environment has made people free and active participants in the celebration of getting the important work of global community and fellowship onto permanent tracks.

The net atmosphere we are immersed in has seemed to liberate us from the traditional corporate straightjacket job wherein we are constrained to do essentially what comes down from company-heaven. Participation comes through nicely as the music that accompanies constant casual informal information sharing through vernacular and devil-may-care palaver. It means that everyone knows what’s going on, what has to be done, and how important it is, and everyone knows how key my participation in it is. A book just out, *The Cluetrain Manifesto*, tells us that this is an answer to our “longing to be part of a world that makes sense rather than accept the accidental alienation imposed by market forces too large to grasp, to even contemplate” (Levine et al. 1999: xxi).

When we felt a need to informalize and loosen up the straight ASCII text of the Internet, perhaps that’s how we invented the “Smilies” to emotionalize the message. With a combination of punctuation marks and little-used keyboard symbols, you can indicate that you are winking, frowning, smiling, or being sarcastic, devilish, lewd, or sleepy, or that the user is an egghead, a dunce, or brain dead, or that you are laughing, skeptical, or your lips are sealed. Of course these expressions look a lot like Egyptian hieroglyphs or Chinese characters, perhaps indicating a direction for us to achieve the ideal marriage between machine and human talk. For a standard indispensable Smilies dictionary, see *The Unofficial Smiley Dictionary*, published by the Electronic Freedom Foundation, at www.eff.org.

Serious people often saw little point in empty palaver and chitchat like this; but *The Cluetrain Manifesto* reminds us: “The attraction was in speech, however mediated. In people talking, however slowly. And mostly, the attraction

lay in the kinds of things they were saying. Never in history had so many had the chance to know what so many others were thinking on such a wide range of subjects. Slowly at first, a new kind of conversation was beginning to emerge, but it would achieve global reach with astonishing speed” (Levine et al. 1999: 4).

In this kind of net world, SCOLA is like a crypto-dot.com initial public offering before its time, an e-commerce wannabe. But look first at what SCOLA technologically is, and then we can outline our ambitions and vision of the future and show you how we intend to do it all.

The SCOLA operation is appropriately on a farm in Iowa. Our antenna farm is 13.1 acres with twenty-five receive-only satellite antennas and one 10-meter Scientific Atlanta Uplink antenna (dish) grounded by four thirty-foot grounds that also act as the ground for the Faraday’s Cage that protects the equipment in the Uplink building (we have lots of lightning storms in Iowa). The horse barn, built in 1917, is currently being renovated; it leaned to the North after a strong South wind microburst and will soon be rededicated and painted oxblood red.

Other glitzy techno-bits running the farm:

- Two 3,000-watt Klystron high-power amplifiers for digital and/or analog signal transmissions.
- The Traveling-Wave-Tube Transmitter for digital transmissions.
- Three channels transmitting SCPC (single channel per carrier) format.
- Three Wegener Mpeg-1 video encoders compressing analog video to a T-1 bandwidth (1.54 Mbps).
- Nine Super VHS NTSC tape decks and one SVHS PAL deck so PAL tapes can be played directly onto our satellite.
- A COMPEL control signal, combined with the output of our encoders, that enables SCOLA to control all of its receivers via satellite; their parameters can be changed manually or automatically via satellite throughout North America. And there is more besides.

What a mess of junk! Speaking of which, daily during lunchtime, Dave Decker (Program/contracts Manager) and John Millar (Network Operations Manager) put on fluorescent orange safety vests and carry spear-headed sticks to walk our Pottawattamie County Road for exercise. They pick up trash along the way, so far netting a couple of horse show trophies now on Marilyn Larson’s desk, and just last week they found a baking pan with Margie Petersen’s name on it. Margie lives over in Minden, thirty miles from here. Rosalie Soloth (SCOLA Insta-Class Manager) and her husband Bob run a real nice showplace farm just over the hill east of the SCOLA farm, and they know Margie Petersen and will phone her to come and get it. She reckons Margie’s husband Harold put the pan loosely in the

