



The case for unintelligent machines

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Have you ever considered the idea that the [Turing test](#) has set computer research back almost least two generations? No, to say "set it back" is incorrect. Rather, maybe our belief that the Turing test was the Holy Grail of computer design set high-tech development off in the wrong direction from the get-go.

Ever since Alan Turing proposed the idea in his paper, "[Computing Machinery and Intelligence](#)," published in 1950, an awful lot of people have been hoodwinked into thinking that they could show how smart they were by creating a computer that could fool someone else into thinking they were talking to a human being.

By trying to make computers more intelligent, maybe we've been barking up the wrong tree, thinking an intelligent computer would be more useful to us. We have business intelligence, intelligent networks, the semantic Web, and speech technology that claims to have an understanding of natural language, to name a few examples.

Perhaps what we really need are dumb computers that do what only machines can do rather than trying to program them to duplicate human thought processes.

Eliminating the human-like element from search

This is not just a question of semantics, whether you call a computer intelligent or not, calling a computer intelligent represents an attitude that leads researchers in the wrong direction.

I came to this rather startling conclusion after talking to Yegor Kuznetsov, director and analyst at Brainware, a company that offers a software product with a unique, unintelligent way to search called Globalbrain.

Bear with me as I explain how dumb Globalbrain is -- and therefore why it's so good at what it does. For the record, Brainware is the search engine, and Globalbrain Suite comprises the applications.

Globalbrain search is used to either find documents that are similar to documents you already know exist, to find documents on a particular subject area, or to find relationships between documents that you might not have known shared similar information, such as a coded message used by a bank to approve subprime loans.

It does this by searching for trigrams rather than complete words. Take the word Brainware. The trigrams are bra, rai, ain, inw, and so on. Brainware will search a document for these trigrams. If there is a match, the trigram is assigned a 1; no match, zero. As documents share trigrams, they are lined up by relevance.

"It eliminates the semantic engine, eliminates linguistic search algorithms, and turns a phrase into a mathematic representation. The human-like element is eliminated from it," says Kuznetsov.

So instead of trying to understand what you are searching for, what an intelligent, say, librarian would do if you asked for help, Brainware doesn't care what you're looking for. It doesn't understand what you are looking for. It only knows, like a bloodhound finding its prey, what scent to follow.

Greater efficiency by gutting the guesswork

And like that bloodhound, Brainware doesn't care whether it's tracking down a kidnapping victim or the kidnapper. I'm not implying dogs are dumb, but the bloodhound is certainly not distracted by whether it is doing the right thing or not.

For example, to continue the doggie analogy, you can let Brainware "smell" two or three similar documents that you want it to find, and it will look for equivalent trigrams, that's all. In other words, once you provide several examples of documents with similar content in whatever format they exist, drag and drop it into the Brainware folder and Brainware tracks it down.

Compare this to contextual search engines such as IBM's Point of View, which searches through unstructured data and then parses those documents by "point of view" about your company's product. To me, this is an example of taking computer science in a direction it shouldn't bother to go. A big waste of a lot of human brain power. It would be better to use a product such as Globalbrain to find all documents that are similar and then let a human being figure out whether they are praising or panning your product.

Who uses this unintelligent search engine? The IRS, for one. The IRS shows the system examples of tax havens, and the system goes out and finds similar documents among the millions of tax returns. It looks for similar concentrations of trigrams in other documents. And statistically, when it finds the highest concentration of those similar trigrams, the IRS has a hit. You can't really do this with Google.

Law firms use it as well to search through millions of documents in litigation cases. In e-discovery, parties have to agree on a certain set of keywords, and they have to be approved. In the case of Brainware, you just deal with a mathematical representation of the text. There's no haggling over key words.

In fact, the Brainware engine is so dumb, it doesn't even know whether it is reading, English, German, Chinese, Japanese, or Korean. How stupid can you get?

Keep tech simple

For too long we have been trying to imitate or re-create linguistics and the human mind. Because we still don't know how the human mind works, computer scientists continue to apply imperfect algorithms.

As Kuznetsov says, "Math is more exact."

If software designers focus more of their efforts on solving just one problem at a time, rather than trying to duplicate the multipurpose human mind, we might just be better off.

Of course, maybe I'm way off base. Maybe the only unintelligent thing here is this particular blog post? Nevertheless, if any readers can come up with other cases where allowing machines to be machines -- and people, people -- results in a better solution to a business problem, send me an e-mail and let me know.