



MAGAZINE

Who Made That Progress Bar?

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Innovation

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“People wait for all sorts of things every day, sometimes more happily than others,” wrote the interface designer Bob Stahl in a 1986 article for *Computerworld*. “The problem is how the user feels about waiting.” At the time, machines were often slow and unreliable, and users didn’t always know when their programs crashed. A “progress bar” might mitigate frustration, Stahl suggested, by signaling that bits were flipping with a purpose somewhere deep inside the C.P.U.

The push to make computers more user-friendly gained momentum in the early 1980s. At a 1985 conference on the nascent field of computer-human interactions, a graduate student named Brad A. Myers presented a paper on the importance of what he called “percent-done progress indicators.” “I had the sense that they were useful and important, and not used as much as they should have been,” Myers says today. (He’s now on the faculty at Carnegie Mellon University.) He told his colleagues that progress bars made computer users less anxious and more efficient, and could even help them to “relax effectively” at work.

To prove his point, Myers asked 48 fellow students to run searches on a computer database, with and without a progress bar for guidance. (He used a capsule that filled from left to right — like a giant thermometer

from a charity drive, tipped on its side.) Then he had them rate their experience. Eighty-six percent said they liked the bars. “People didn’t mind so much if it was inaccurate,” Myers says. “They still preferred the progress bar to not having anything at all.”

Since the ‘80s, other kinds of progress bars — audio, tactile — have been suggested, but the horizontal form prevails. There have been some refinements: Bars now strobe in color, or show an animated ribbing that slides back against the grain. These effects can fool the brain and make a bar appear to move more quickly, says Chris Harrison, another Carnegie Mellon scientist. Because people hate to see a progress bar reach a standstill, some inch forever forward even while a task is stalling out. For Harrison, these tricks raise a funny question: “Do users really want the truth, or do they want the more relaxed, more comfortable experience?”

There’s a deeper question still: Is a progress bar a tool to make us more efficient or a sop that helps us pass the time? Its ancestor, the pen-and-paper “progress chart,” showed up in the early 20th century and was hailed at the time as a major innovation. It “refers all facts to the irreducible and final element of human life — time,” wrote Walter Polakov, an early pioneer in project management (and dedicated Marxist), in 1923. “Because it is true to the human dimension, it is both human and humane; hence it obliterates conflicts between men and management, promotes the fullest exercise of man’s creative forces and places work in its proper relation to life.”

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