

# PAGE NOT FOUND A BRIEF HISTORY OF THE 404 ERROR

**THE NOTORIOUS** 404 error, “Not Found,” is often, not totally erroneously, referred to as “the last page of the internet.” It’s an obligatory heads-up with an outside reputation; it is a meme and a punch line. Bad puns abound. The error has been printed in comics and on T-shirts, an accessible and relatable facet of what was once relegated to nerd humor and is now a fact of digital life.

That the 404 should have crossover appeal seems fitting. It is near-universal and inherently emotional: pure disappointment, the announcement of an unanticipated problem. It’s also a reminder that technology, and the web in particular, is made by humans, and therefore fallible. The internet, after all, is hardly a well-oiled machine; it’s more like a version of *The Garden of Earthly Delights* built by unidirectional hypertext and populated by broken links, corrupted image files, and incomplete information.

Not long after it appeared, the error code began to enjoy, or endure, its share of lore. In the early 2000s, the idea bubbled up that the 404 came from, well, room 404; that this room housed the web’s first servers, at CERN (the European Organization for Nuclear Research, in Switzerland); that World Wide Web inventor Tim Berners-Lee had his office there; that he frequently could not be found.

“Sigh,” wrote Robert Cailliau, a pioneer, with Berners-Lee, of the hypertext structure that led to the web. When asked for comment on the 404 error, he seemed less than thrilled to be approached with what he called “trivia.” Cailliau was adamant that the mythology is hogwash.

Error codes were a necessity but not a center-stage concern. “When you write code for a new system, you don’t waste too much time writing long messages for the situations in which you detect an error,” Cailliau wrote in an email to me. Memory was, at the time, also an issue; longer messages were impractical. (“Modern geeks have no longer any idea what it was like to program with 64k of memory,” he wrote.)

The solution was straightforward: designate numerical ranges for error categories. This was done, in Cailliau’s telling, “according to the whims of the programmer.” Client errors fell into the 400 range, making “404” a relatively arbitrary assignation for “not found.” Cailliau was adamant: “404 was *never* linked to any room or any physical place at CERN,” he wrote. “That’s a complete myth.”

When asked if he had any theories about why the error so enchanted people, Cailliau wrote “I don’t even have a hunch about the 404 fascination. And frankly I don’t give a damn. The sort of creativity that goes into 404 response pages is fairly useless. The mythology is probably due to the irrationality, denial of evidence, and preference for the fairy

tale over reality that is quite common in the human species ... These human traits were relatively innocent in the past, when individual influence was small and information spread slowly. Today, and in no small way due to the existence of the net, these traits have gained a power that is dangerous.” As examples, he cited the election of Donald Trump, the deterioration of the EU, meek political responses to gun violence, and the proliferation of euphemism (“climate change”). Or the fascination could just be a dash of humanity, an appreciation that the internet is made by humans, and humans—especially on the internet—are often bored.

Whatever the appeal, the 404 is firmly cemented in the mainstream: Even Hillary Clinton’s campaign website displayed a photograph of the presidential candidate trying—and failing—to swipe a MetroCard, a sort of “oh, me” autoeyeroll. It’s now a place where corporate “voice” roams free, chummily empathizing or leveling with the thwarted user (in other words, a branding opportunity). Or perhaps it’s just a way of breaking down the fourth wall. Tumblr takes a cheeky approach: “There’s nothing here ... Unless you were looking for this error page, in which case: Congrats! You totally found it.” Pixar’s 404 page reads, “Awww ... Don’t Cry. It’s just a 404 Error!” next to an illustration of the Sadness character from *Inside Out*. Bloomberg offers a triptych animation of a man slapping a computer off a desk, then spontaneously breaking into pieces. The latter is a little bizarre—and slightly dramatic. Then again, who among us hasn’t been there—especially while en route to somewhere else? 📄

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