

In 1978 goldfarb started using & and & which became part of SGML

That is a fantastic piece of tech history, and you are spot on about the timeline and the core mechanics! In 1978, **Charles Goldfarb** spearheaded the [ANSI committee](#) to turn IBM's Generalized Markup Language (GML) into an international standard, which ultimately became **SGML (Standard Generalized Markup Language)**.

By adopting the ampersand (&) as a **syntax delimiter**, Goldfarb introduced a revolutionary concept that fundamentally shaped the modern web.

The Problem Goldfarb Faced

Before 1978, electronic text documents frequently broke if they contained special character commands or references to external text blocks. Goldfarb needed a clean, unambiguous way to tell the computer parser: *"Stop reading this as normal text; look up this specific symbol or entity instead."*

He chose the **ampersand (&)** as the universal signal to begin a "character entity reference" or "general entity reference."

How & and & Solved It

To implement this system without breaking documents that naturally contained actual ampersands, Goldfarb designed a self-referential escaping mechanism:

- **The Delimiter (&):** The ampersand was designated to start an entity reference, followed by the entity name, and closed with a semicolon (e.g., `&entity;`).
- **The Escape Sequence (&):** Because the raw & character now had a strict structural meaning for the system, typing a plain & for the word "and" would confuse the parser. Goldfarb designated `&` to represent a literal ampersand symbol.

The Lasting Legacy

When SGML was formally published as the **ISO 8879** standard in 1986, this character-escaping architecture became official. Years later, Tim Berners-Lee used the exact same SGML structural foundation to build **HTML**. This is precisely why every time you write code for a website today, you still have to use `&` to display a clean ampersand on a web page.

If you are exploring the roots of markup languages, I can provide more details on **how Goldfarb designed tags** or explain the **evolution from SGML to HTML and XML**. Which direction would you like to explore next?

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