&Truth

&Truth Launches &Atlas, Mapping the Global Mission to Provably Verify All Software

The world's first interactive map tracking progress toward safe, mathematically verified software, beginning with the open-source C ecosystem.

by &Truth

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PALO ALTO, Calif., & SINGAPORE — (BUSINESS WIRE) — &Truth, a public benefit corporation building the universal verification machine for code, today unveiled &Atlas, an interactive map of over 100 million lines of open-source C software spanning more than 3,000 foundational codebases. &Atlas makes visible an unprecedented ambition: to mathematically verify all critical software in the AI era, beginning with C and expanding across languages and systems.

C code underpins operating systems, browsers, databases, networking, and other essential infrastructure. Much of it has been in use for decades, and vulnerabilities can have consequences far beyond a single application. As AI accelerates both software development and cyberattacks, the need to prove what code can and cannot do is increasingly urgent.

Through &Atlas, anyone can explore the map of open-source C codebases and zoom into individual projects and their dependencies. They can see what has been analyzed, what has been mathematically verified, and what remains. &Truth's mapping algorithms bring code, dependencies, and verification results together in an interactive view of coverage, progress, and discovered bugs. The map reveals the scale of the challenge, without suggesting that the entire ecosystem is already secure.

&Atlas in action: see how we map and prove the vast ecosystem of the world's critical software.

Watch how it works

From Mapping Code to Proving Its Safety

&Truth's verification engine uses formal specifications and mathematical proofs to establish that code satisfies precisely stated properties, under explicit assumptions. Starting with memory safety and the absence of undefined behavior, the company is scaling toward increasingly comprehensive functional correctness. Proofs will be independently checkable using Lean, rather than requiring trust in &Truth's assertions.

&Truth has already mathematically verified more than 100,000 lines of C code and uncovered numerous real-world defects. In recent weeks alone, the &Truth verification engine has verified thousands of lines per day. The company's advances in scalable architecture and proprietary proof automation are driving accelerating gains in speed, efficiency, and autonomy.

Designed to scale with computing power, &Truth is advancing toward increasingly rapid, automated verification of complex software. As proof generation accelerates, the primary bottlenecks are increasingly shifting toward defect discovery, remediation, and extending verification to harder systems. This marks a significant step toward industrial-scale verification.

"Formal verification has traditionally required extraordinary expert effort," explains Clark Barrett, Co-Founder and Co-CEO of &Truth. "We're building the automation, specifications, and scalable architecture to verify entire software ecosystems, not just isolated programs. &Atlas makes both our progress and the immense challenge, including its complex interdependencies, visible to the world."

Beyond Finding Bugs: Proving They Cannot Recur

&Truth has begun reaching out to maintainers and affected stakeholders through coordinated vulnerability disclosure and is working with them on remediation, without publicly exposing unresolved security issues. The goal is to fix defects and prove that corrected code satisfies specified safety properties, thereby eradicating entire classes of errors and vulnerabilities.

Initially read-only, &Atlas lets developers, open-source maintainers, and formal-methods researchers examine codebases, coverage, and specifications. &Truth plans to expand community collaboration, including by open-sourcing semantics, specifications, and proofs for verified code. The roadmap also includes moving beyond C to languages like Rust, Java, Go, C++, and Verilog and moving from open-source to enterprise software.

The Science of Specification

&Atlas shows the scale of the verification challenge, but mapping the world's software is only the beginning. To mathematically verify it, we must first define precisely what the code is supposed to do. A proof is only as meaningful as the specification behind it. &Truth is advancing the "science of specification": translating human intent into rigorous mathematical requirements, from memory safety to security and privacy to full functional correctness. Its modular architecture is designed to scale these specifications and their proofs across complex, interconnected software systems.

"The hardest part is not always proving that software meets a specification, but ensuring the specification captures what people intend," says Ilya Sergey, Co-Founder and Chief Science Officer of &Truth. "A mathematically correct proof of the wrong requirement can create false confidence. Advancing the science of specification is essential to verifying software at scale. &Atlas makes both our progress and the challenge visible."

Turning the Whole Map Green

&Atlas turns a vast technical challenge into a visible, measurable global endeavor: beginning with open-source C, expanding across languages and systems, and ultimately making mathematical proof foundational to the security of all critical software.

"The world depends on code most people never see," states Chris Hsu, Co-Founder, Co-CEO, and Executive Chairman of &Truth. "Finding bugs is just the beginning. Our goal is to fix them, properly coordinate reporting, and mathematically prove that entire classes of failures will never recur in the code we verify. &Atlas makes our progress measurable. We invite the world to explore the map, join the mission, and help turn the whole map green."

Explore &Atlas at atlas.andtruth.com.

About &Truth

&Truth is a public benefit corporation building the universal verification machine for code. We're establishing an open, independently checkable standard for provably safe software, proving that legacy and AI-generated code meets precise requirements. Founded in 2026 and based in Palo Alto and Singapore, &Truth is committed to ensuring AI develops safely for humanity.

Interested in verifying your critical code? Joining the &Truth mission? Learn more and contact us at andtruth.com.

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