

Why TERNARY LOGIC Makes More Sense Than Boolean Logic, by Codeolence

Buckminster Fuller would approve.



VINYASI

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Douglas W. Jones on [Ternary Logic](#)

— Douglas W. Jones on [Ternary Computing](#)

The Ternary Manifesto

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Abstract

An alternative basis for development of a completely incompatible digital infrastructure is presented here. This minimizes the potential for leakage of information, particularly malware and other covert content from our existing digital infrastructure. This effort can be described as taking *security through obscurity* as a fundamental design principle.

Using base 3 instead of base 2 maximizes the incompatibility. This suggests that word-sizes should be measured in trits, not bits. The numbers 3, 9, 27 and 81 show up naturally in our new world, so we suggest the use of a 3-trit trybble, a 9-trit tryte, and a 27-trit word. This has strong consequences across the board, from digital circuits to character codes and programming language semantics.

While this work began as something of a joke, there are some very serious reasons that ternary logic may have value. One ternary digit, a trit, can represent 1.58 bits. Thus, a ternary computer with 21-trit words could handle values slightly larger than a 32-bit binary computer can handle. One of the limiting factors in high-end computer architecture has long been the density of interconnect wiring between the system components. Reducing the number of wires to 64% may well be worth the cost even if the move to ternary increases the total number of transistors required to build a computer.

Thanks, [Mathew](#), for [bringing this](#) to my attention.