Keynote: Recent Discoveries from Paxos

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Abstract
The rapid decrease in the cost of computing and networks has made fault tolerance much cheaper. The gradual increase in the IQ of system designers is leading to a switch from programming hacks to provably fault-tolerant algorithms. These developments have motivated the resumption of archaeological research on Paxos. Some lower-bound theorems have recently been dug up, along with algorithms that achieve them. Rigorous examination of the hypotheses of these theorems have led to more efficient algorithms in certain interesting cases. Great excitement has been generated by a recently discovered parchment. There are indications that it was considered very significant by the Paxons. If it can be deciphered in time, its contents will be presented.

Bio
Dr. Lamport received a doctorate in mathematics from Brandeis University, with a dissertation on singularities in analytic partial differential equations. This, together with a complete lack of education in computer science, prepared him for a career as a computer scientist at Massachusetts Computer Associates, SRI, Digital, and Compaq. He claims that it is through no fault of his that of those four corporations, only the one that was supposed to be non-profit still exists. He joined Microsoft in 2001, but that company has not yet succumbed. Dr. Lamport’s initial research in concurrent algorithms made him well-known as the author of LaTeX, a document formatting system for the ever-diminishing class of people who write formulas instead of drawing pictures. He is also known for writing, “A distributed system is one in which the failure of a computer you didn’t even know existed can render your own computer unusable”, which established him as an expert on distributed systems. His greatest contribution to humanity is Lamport’s Law, which states that, to a first approximation, grinding coffee beans does not change the volume that they occupy. Among his other contributions is the TLA+ specification language, which represents a Quixotic attempt to overcome engineers’ antipathy towards mathematics. Dr. Lamport has received three honorary doctorates from European universities. The IEEE is sending him to Italy to receive the Piore Award. He has not taken the hint and continues to return to his home in California.