

**Amdahl's Law:** Amdahl's Law is a formula in computer engineering that calculates the maximum amount of improvement of a task based on an upgrade to a specific part of a system. This specific formula, founded by Gene Amdahl who was a Computer Scientist at IBM, is used most commonly used to estimate the maximum performance boost of a program with the addition of processors. Amdahl's Law is mainly used when talking about parallelization, or the process of many calculations being executed at the same time. Parallelization takes large calculations and breaks them down into smaller calculations, then runs those calculations at the same time, shortening the time tasks take until completion and this is mainly what Amdahl's Law refers to, the number of calculations and the time taken vs the upgrade or improvement to the system the calculations are ran on.

**Moore's Law** - Moore's Law is the idea that every two years, the number of transistor, a semiconductor used to amplify or switch electronic signals/power, on computer CPUs will increase by two times the previous amount. This observation was made by Gordon Moore, the Co-founder of Intel and has, for the most part, continued to present itself with the development of newer and newer processors.

**Opinion** - Between Amdahl's Law and Moore's Law, the most likely law to continue its validity into the future is Amdahl's Law simply due to the fact that Amdahl's Law is more of a calculation than an observation/hypothesis. Moore's second law also presents more doubt to the possible continuance of Moore's Law. Rock's Law describes the fact that as consumer prices for processors decreases, the cost of research and development (R&D) as well as manufacturing and testing, increases steadily. While these two major points damage the idea of Moore's law continuing any further, it has already been seen that there are other ways to increase processing power rather than slapping on more transistors, and Intel themselves recently estimated that the shrinking of transistors could only be feasible for another 5 years (2016). With that being said, it is my opinion that the Amdahl's Law will be a more sustainable law for the future of computer engineering and that Moore's law will only be viable for another decade at best.