**MOORE’S LAW**

Moore’s Law is simply an anticipation of Gordon Moore in 1965 that the number o transistors in a dense Integrated Circuit (IC) doubt approximately about every two years. It is not a proven theory but just an empirical observation when he was working at Fairchild Semiconductor. He further said that this growth would be exponential (the number of transistors keeps on increasing and cost keeps on decreasing).

**PHYSICAL LIMITATIONS**

1. The increase in number of transistors is directly proportional to power. When power is increased, more heat is generated which requires a proper cooling system (dry/liquid) to be in place.
2. There is power leakage from the transistors and should alter the voltage.
3. Noise is one of the major limitations when voltage is increased, but to switch transistors a minimum voltage is required.
4. Dynamic power consumption is reduced by voltage scaling.
5. The smaller the number of transistors, the faster they will be able to switch.