

Ask The Analyst

Question 15

Are We - As Gordon Moore Himself Has Suggested - About To Reach The End Of Moore's Law? If So What Will This Mean For Personal Computing?

Answer:

Not yet. Moore's Law is an exponential and what Gordon was acknowledging was the fact that no exponential can continue forever. The traditional 'implementation' of Moore's Law was achieved by scaling - making the transistors progressively smaller - which enabled more transistors to be built in the same physical space; more transistors equating to increased performance, hence faster and more powerful computers.

Conventional transistor scaling has been in the horizontal plane, making the gaps smaller, hence the terminology 90nm, 65nm, 32nm, 22nm etc. It is this plane opportunity that is starting to get difficult and probably won't work at 12nm, for purely physics reasons.

All this really means is we will be forced to build the transistors differently plus we will start to use 3D techniques, all of which will keep Moore's Law alive and well for a lot more years yet.

So from a system perspective, increased performance can still be achieved and we can still look forward to more of the same for our personal computers.